

Owner's Operating Service Instruction Manual

10¢

- ASSEMBLY
- OPERATION
- REPAIR PARTS

Model Nos.

135-470A

135-475A

135-480A

135-485A

34" RIDING MOWERS

WARRANTY

For one year from date of purchase, MTD Products Inc will replace for the original purchaser, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. All transportation charges on parts submitted for replacement under this warranty must be paid by the purchaser. This warranty does not include replacement of parts which become inoperative through misuse, excessive use, accident, neglect, improper maintenance or alterations by unauthorized persons. This warranty does not include the engine, motor, battery, battery charger or any component parts thereof. For service on these units, refer to the applicable manufacturer's warranty.

The above warranty will apply only to the original owner and will be effective only if the warranty card has been properly processed. It will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. UNDER NO CIRCUMSTANCES WILL THE RETURN OF A COMPLETE UNIT BE ACCEPTED BY THE FACTORY UNLESS PRIOR WRITTEN PERMISSION HAS BEEN EXTENDED.

I M P O R T A N T

SAFE OPERATION PRACTICES FOR RIDING VEHICLES

1. Know the controls and how to stop quickly—**READ THE OWNER'S MANUAL.**
2. Do not allow children to operate vehicle. Do not allow adults to operate it without proper instruction.
3. Do not carry passengers. **Keep children and pets a safe distance away.**
4. Clear work area of objects which might be picked up and thrown.
5. Disengage all attachment clutches and shift into neutral before attempting to start engine
6. Disengage power to attachment(s) and stop engine before leaving operator position.
7. Disengage power to attachment(s) and stop engine before making any repairs or adjustments.
8. Disengage power to attachment(s) when transporting or not in use.
9. Take all possible precautions when leaving vehicle unattended such as disengaging power-take-off, lowering attachments, shifting into neutral, setting parking brake, stopping engine and removing key.
10. Do not stop or start suddenly when going uphill or downhill. Mow up and down face of steep slopes; never across the face.
11. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.
12. Stay alert for holes in terrain and other hidden hazards.
13. Use care when pulling loads or using heavy equipment.
 - A. Use only approved drawbar hitch points.
 - B. Limit loads to those you can safely control.
 - C. Do not turn sharply. Use care when backing.
 - D. Use counterweight(s) or wheel weights when suggested in owner's manual.
14. Watch out for traffic when crossing or near roadways.
15. When using any attachments never direct discharge of material toward bystanders nor allow anyone near vehicle while in operation.
16. Handle gasoline with care—it is highly flammable.
 - A. Use approved gasoline container.
 - B. Never remove cap or add gasoline to a running or hot engine or fill fuel tank indoors. Wipe up spilled gasoline.
 - C. Open doors if engine is run in garage — exhaust fumes are dangerous. Do not run engine indoors.
17. Keep the vehicle and attachments in good operating condition, and keep safety devices in place. Use guards as instructed in owner's manual.
18. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
19. Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
20. To reduce fire hazard keep engine free of grass, leaves or excessive grease.
21. The vehicle and attachments should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.
22. Do not change the engine governor settings or overspeed the engine.
23. When using the vehicle with mower, proceed as follows:
 - (1) Mow only in daylight or in good artificial light.
 - (2) Never make a cutting height adjustment while engine is running if operator must dismount to do so.
 - (3) Shut engine off when removing grass catcher and/or unclogging chute.
 - (4) Check blade mounting bolts for proper tightness at frequent intervals.
24. Check grass catcher bags frequently for wear or deterioration. Replace with new bags for safety protection.
25. Look behind to make sure the area is clear before placing the transmission in reverse and backing up.

INDEX

Safe Operation Practices	2
Index and Assembly	3
Controls	6
Operating Instructions	8
Maintenance	10
Lubrication and Adjustments	11
Belt Replacement	13
Off-Season Storage	16
Trouble Shooting Chart for Recoil Start	17
Trouble Shooting Chart for Electric Start	18
Schematic for Recoil Start Unit	19
Schematic for Electric Start Unit	20
Differential Breakdown and Parts List	21

Deck Linkage	22
Transmission Breakdown	23
Transmission Parts List	24
Battery Warranty	25
Illustrated Parts for R.H. Side of Rider	26
Parts List for R.H. Side of Rider	27
Illustrated Parts for L.H. Side of Rider	28
Parts List for L.H. Side of Rider	29
Illustrated Parts for Frame View	30
Parts List for Frame View	31
Parts Information	33

GRASS CATCHER Model No.195-015A is available as optional equipment for the mowers shown in this manual.

WARNING

The mower should not be operated without the entire grass catcher or chute deflector in place.

NOTE

Under normal usage bag material is subject to wear, and should be checked periodically. Be sure any replacement bag complies with the mower manufacturer's recommendations. For replacement bags, use only factory authorized replacement bag No. 764-0121.

IMPORTANT: After striking a foreign object, stop the engine. Remove wire from spark plug, thoroughly inspect the mower for any damage, and repair the damage before restarting and operating the mower.

The steering wheel and seat, with the necessary hardware, are easily assembled to the machine. On the electric starter models, the battery must be activated and installed as outlined in this section.

TIRE PRESSURE

For shipping purposes, the tires on your unit may be over-inflated. Tire pressure should be reduced before unit is put into operation. Pressure should be approximately 15 p.s.i. Equal tire pressure should be maintained on all tires. **Maximum** tire pressure is 30 p.s.i.

NOTE

Reference to right-hand or left-hand side of machine is from the driver's seat facing forward.

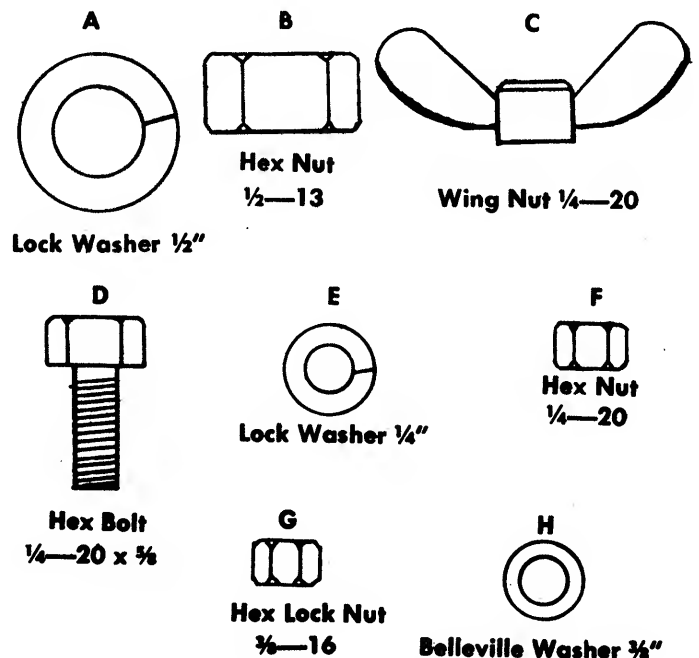


FIGURE 1. HARDWARE SUPPLIED

- Step 1. Remove the lawn mower and all parts from the carton. Make certain that all loose parts and literature have been removed before the carton is discarded.
- Step 2. Place steering wheel over steering shaft.
- Step 3. Secure with Belleville washer and hex nut. See figure 2.
- Step 4. Press the cap on the steering wheel by hand. See figure 2.

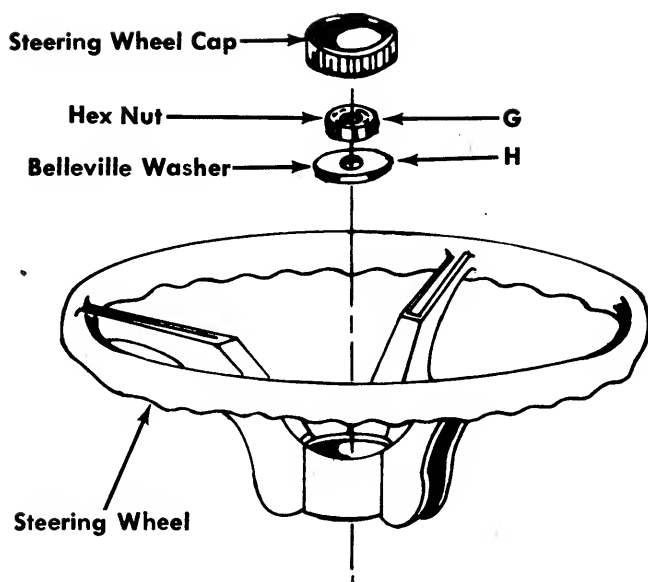


FIGURE 2. STEERING WHEEL ASSEMBLY

Step 5. Your molded seat comes with the mounting bolt molded in the seat.

- A. Select one of three hole locations on seat spring.
- B. Place seat on spring and secure with lock-washer (A) and hex nut (B). See figures 1 and 3.

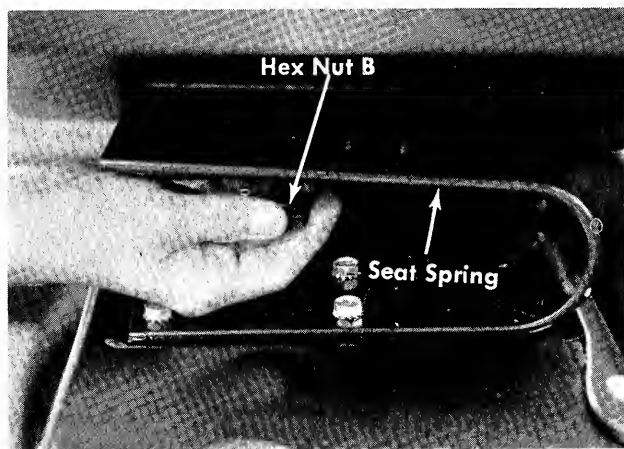


FIGURE 3 SEAT ASSEMBLY

NOTE

Check ALL nuts and bolts for correct tightness.

ACTIVATING THE BATTERY (Electric Start Models Only)

Step 6.

DANGER

**BATTERIES CONTAIN SULFURIC ACID
MAY CONTAIN EXPLOSIVE GASES
(When Electrolyte Has Been Added)**

- A. Keep sparks, flame, cigarettes away.
- B. Hydrogen gas is generated during charging and discharging.
- C. Ventilate when charging or using in enclosed space.
- D. When using a charger—to avoid sparks, never connect or disconnect charger clips to battery while charger is turned on.
- E. Always shield eyes, protect skin and clothing when working near batteries.

WARNING

Since battery acid is corrosive to metals, do not pour into any sink or drain. Rinse empty electrolyte containers and mutilate before discarding. If acid is accidentally spilled on battery during filling or charging, or on bench or clothing, etc., flush off with clear water and neutralize with soda or ammonia solution.

1. Place battery to be filled on bench or workbench. Never activate battery in mower. Remove vent plugs from all cells.
2. Fill each cell carefully using battery grade 1.250-1.265 specific graviy. Sulfuric acid to $\frac{3}{8}$ " above the top of the separators or to the split ring.
3. Allow battery to set for 20 minutes. Battery can then be installed, however, to have maximum capacity the battery should be placed on a charger after the 20 minutes setting period. Battery can be charged at maximum of 35 amperes until the specific gravity reading is 1.265-1.275.
4. The battery should be checked with a hydrometer after every 25 hours of operation. If the specific gravity is less than 1.225 remove battery and re-charge.
5. The battery should be kept clean. Any deposits of acid should be neutralized with soda and water. Be careful not to get this solution in the cells. Coat the terminals with a thin coat of grease.
6. If the battery is not going to be used in the winter, remove the battery and store in a cool, dry place. Do not store directly on a concrete floor as this will drain the battery. Recharge whenever the specific gravity is less than 1.225.

INSTALLING THE BATTERY

1. Open the hood of the riding mower.
2. Place the battery in the battery case with the terminal to the front. See figure 4.

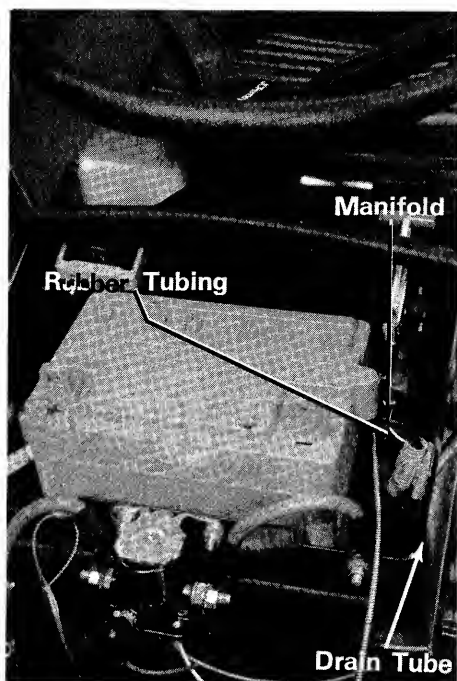


FIGURE 4.

3. Cut the black rubber tubing approximately 4 inches long.
4. Push the rubber tubing into the manifold of the battery and place the other end into the drain tube. See figures 4 and 5.

NOTE

The vented battery allows any gases or liquid from the battery to be carried to the rear of the mower through the drain tube.

5. Hook the hold down rods under the battery case and place the hold down over the manifold of the battery as shown in figure 6.
6. Secure the hold down with the wing nuts.
7. Attach the positive cable (from the starter solenoid) and the small wire (from the ammeter) to the positive battery terminal with the bolt, lockwasher and nut in the assembly pack.
8. Attach the negative cable, grounded, to the negative battery terminal with the bolt, lockwasher and nut in the assembly pack.

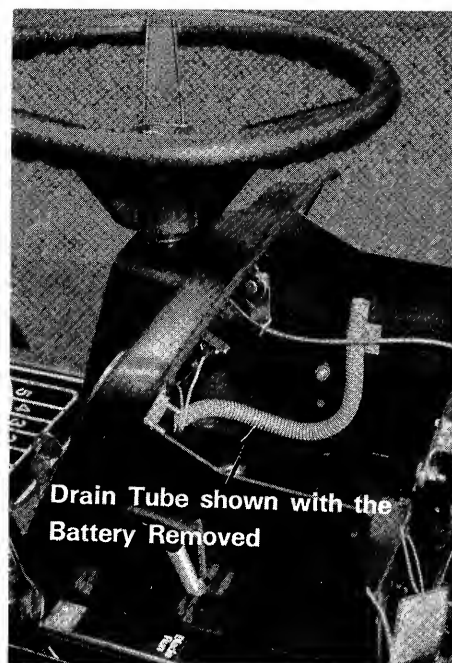


FIGURE 5

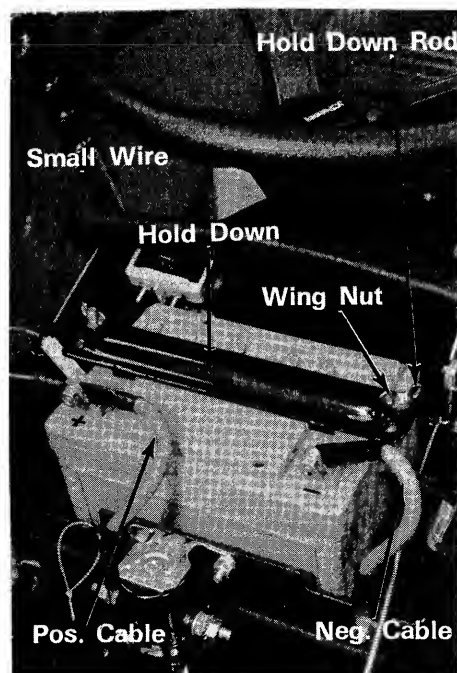


FIGURE 6

CONTROLS

The controls on both models may be considered as the Drive Control and the Cutting Control as follows:

a. **Throttle Control.** The throttle control is used to regulate the engine speed and choke the engine. The engine should be operated from $\frac{3}{4}$ to full throttle when operating the cutting deck or snow thrower (optional). See figure 7.

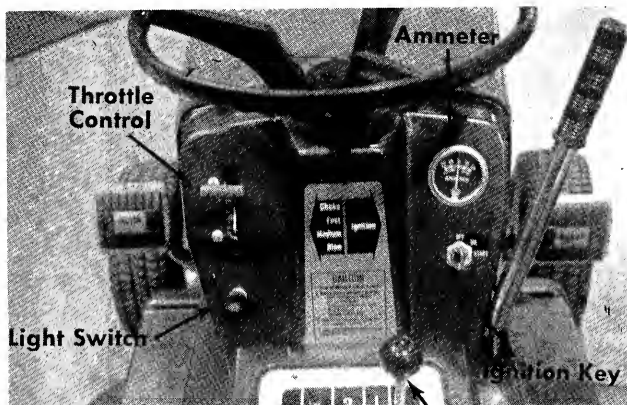


FIGURE 7. CONTROLS

b. **Gear Shift Lever.** The gear shift lever is used to shift into one of four Forward Gears, NEUTRAL or REVERSE. See figures 7 and 8.

c. **Brake.** The brake pedal is located on the right hand side of the mower and is operated by depressing it with your right foot. See figure

d. **Brake Lock.** The brake lock is located on the right hand side of the mower. To lock the brake, depress the brake pedal and lift up the lock button. The pedal will stay depressed. To release, depress the pedal. See figure 7.

e. **Clutch Pedal.** The clutch pedal is used to disengage the drive mechanism. Depressing the clutch pedal at any time will reduce mower speed. If depressed all the way, it will stop the mower. See figure 9.

f. **Clutch Lockout.** When the clutch pedal is depressed all the way it can be locked by placing the clutch lockout in the START position as shown in figure 10. The clutch lockout must be in this position before the engine will start.

g. **Stop Lever.** The stop lever allows you to regulate the maximum ground speed of the riding mower by setting the stop lever in any one of the five settings. The farther forward the stop lever is set, the faster the ground speed. See figure 10.

h. **Ammeter. (Electric Start Model Only.)** The ammeter registers the rate of battery charge or discharge. The ammeter should register on the plus side (+) when the engine is running in the fast position until the battery is completely charged. With a fully charged battery or with the engine idling the ammeter will not show a charge. See figure 7.

i. **Light Switch. (Electric Start Only.)** Pull the light switch out to turn on the lights. The lights will only operate when the engine is running. See figure 7.

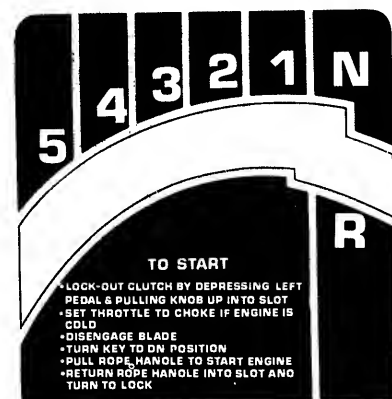


FIGURE 8. SHIFT PATTERN (Recoil)

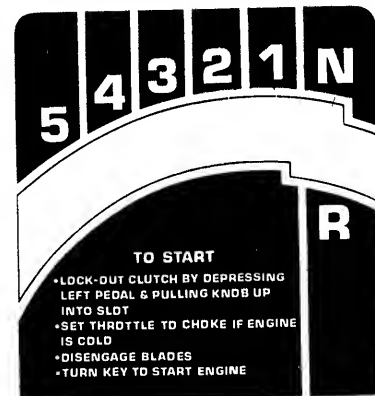


FIGURE 8a. SHIFT PATTERN (Electric)

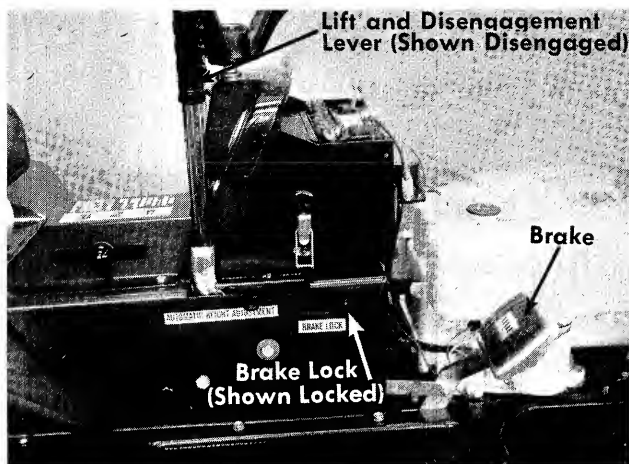


FIGURE 9. RIGHT HAND CONTROLS

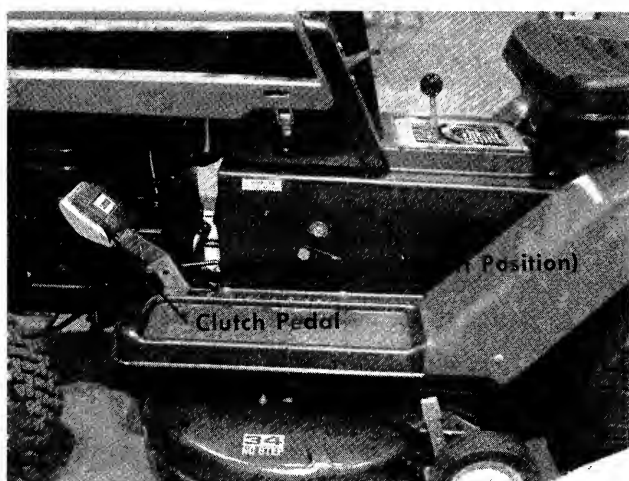


FIGURE 10. LEFT HAND CONTROLS

j. Ignition Switch. The ignition switch is located on the right side of the dashboard.

Recoil Model. See figure 11. Turn the key to the ON position when starting the engine. To stop the engine turn the key to the left to the OFF position and remove the key to prevent accidental starting.

Electric Start. See figure 7. Turn the key to the START position to start the engine. When the engine is running, let the key return to the ON position. To stop the engine, turn the key to the left to the OFF position and remove it to prevent accidental starting.

NOTE

The engine will not start unless the clutch lockout is in the START position and the lift lever is in the DISENGAGED position.



FIGURE 11. RECOIL STARTER

k. Recoil Starter. The recoil starter is located on the right side of the dashboard. The recoil starter can either be pulled while seated on the rider or pulled while standing behind the rider. The ignition key must be on before the engine will start. After the engine starts, the recoil starter handle must be returned and locked into the dashboard before the blades or clutch are engaged. The engine will stop if you do not follow these instructions. See figure 11.

l. Lift and Disengagement Lever. It is used to raise the cutting deck. Pulling it all the way back and locking it disengages the blades. The engine will not start unless the lift and disengagement lever is in the disengaged position. See figure 9.

m. Cutting Controls. The cutting controls consist of the height of cut stop and the wheel height adjusters.

Height of Cut Stop. See figure 12. Lift the stop and set it at the desired cutting height.

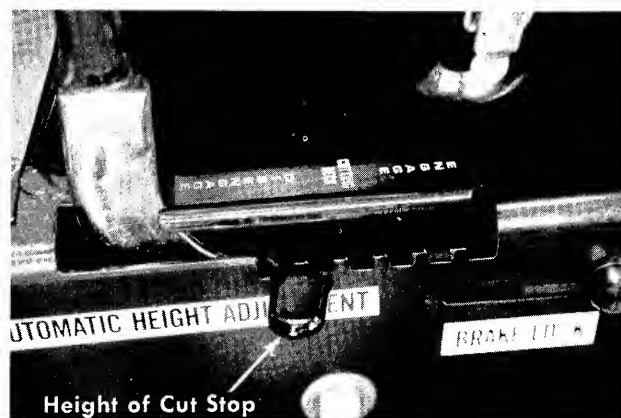


FIGURE 12. HEIGHT OF CUT SETTINGS

Wheel Height Adjuster. See figure 13. Move the lever towards the wheel and set it in the desired cutting height.

The cutting height of the mower can be set in two different ways: FULL FLOAT position where the deck follows the contour of the ground, and the SUSPENDED position where the deck hangs from the frame of the rider. The suspended position is normally used for cutting rough uneven ground.

To set the cutting deck in the full float position, set the wheel height adjusters in the desired cutting height as indicated in figure 13. Set height of cut stop in the 1½ position. See figure 12.

To set the cutting deck in the suspended position, set the height of cut stop in the desired cutting height and then set the deck wheel so they just clear the ground.

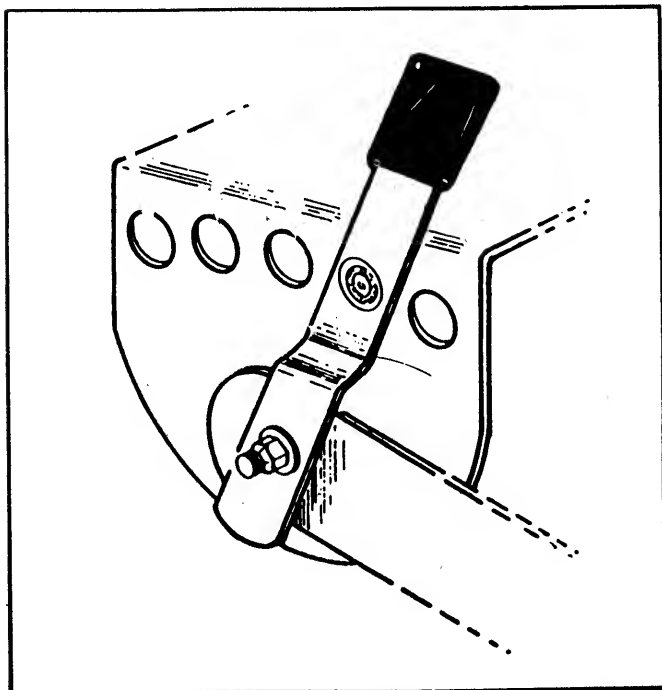


FIGURE 13. WHEEL HEIGHT ADJUSTER

CAUTION

Parking Brake **MUST** be disengaged before unit is put into motion.

NOTE

Unit is equipped with separate brake and clutch pedals. To efficiently stop, it is necessary to disengage clutch when applying brakes.

OPERATING INSTRUCTIONS

STARTING THE ENGINE

Be sure to follow the instructions for the oil and gasoline as described in the engine manual.

Step 1. Be sure the fuel shut-off valve is open. See figure 14.

Step 2. Place the clutch lockout in the START position. See figure 10.

Step 3. Place the lift and disengagement lever in the DISENGAGED position. See figure 9.

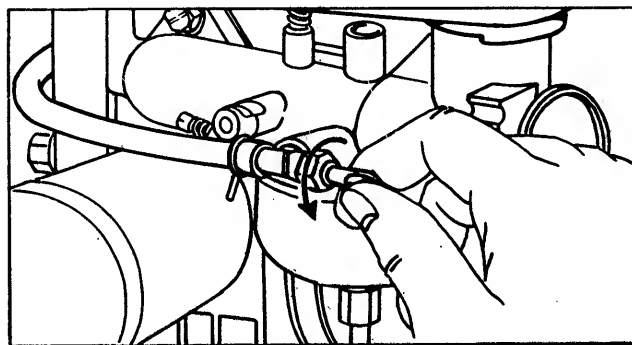


FIGURE 14. FUEL SHUT-OFF VALVE

Step 4. Set the throttle control in the CHOKE position. See figure 7.

Step 5. Recoil Starter.

- a. Turn the ignition key to the ON position. See figure 15.
- b. Grasp the recoil starter, unlock it by twisting it ¼ turn and pull it out sharply and hold it in the out position.
- c. Slowly release the recoil starter and lock it into the dashboard as shown in figures 15 and 17.

Electric Start

See figures 17 and 19. Turn the ignition key to the START position. When the engine is running, let the key return to the ON position.



FIGURE 15. RECOIL STARTER



FIGURE 16. STARTER SWITCH

TO START

- Lock-out clutch by depressing left pedal & pulling knob up into slot
- Set throttle to choke if engine is cold
- Disengage blade
- Turn key to on position
- Pull rope handle to start engine
- Return rope handle into slot and turn to lock

FIGURE 17. STARTING INSTRUCTION LABEL

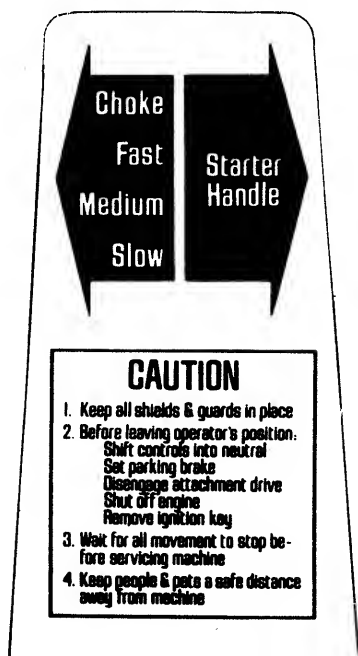


FIGURE 18. DASH PANEL LABEL (Recoil Starter)

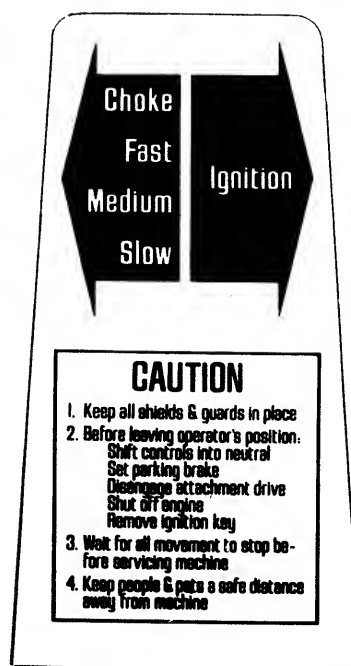


FIGURE 19. DASH PANEL LABEL (Electric Starter)

To stop either model, turn the key to the left to the OFF position and remove the key to prevent accidental starting.

NOTE

A brief break-in period is essential to ensure maximum engine and mower life. This consists of running the engine at half speed for a period of time required to use one tank of gasoline. It is also recommended to change crank-case oil after the first 2 hours of operation.

STOPPING THE ENGINE

Turn the ignition key to the left to the OFF position and remove the key to prevent accidental starting.

OPERATING THE MOWER

Step 1. Set the desired cutting height.

Step 2. Start the engine as outlined on page 7.

Step 3. Select gear and shift.

NOTE

As you become familiar with the operation of the mower you can move the stop lever to a faster position.

Step 4. While holding down the clutch pedal, move the clutch lockout lever forward.

Step 5. Put the gear shift lever into either FORWARD or REVERSE.

NOTE

DO NOT force the gear shift lever! If the lever cannot be moved from NEUTRAL to one of the drive positions, release the clutch pedal slowly, depress it again, and then move the gear shift lever as required.

Step 6. Once the machine is in motion, remove foot from the pedal. The mower will now move ahead or to the rear, and the use of the steering wheel will provide directional control.

Step 7. The mower is brought to a stop by pressing your right foot against the brake pedal and your left foot against the clutch pedal. The drive belt will be disengaged and the brake will be applied.

CAUTION

Gear changing should be done only after the mower has been brought to a full stop. If the mower is not to be used for a long period, place the gear shift lever in NEUTRAL and stop the engine. DO NOT leave the machine on an incline.

OPERATING THE CUTTER BLADE

The cutting blades may be engaged while the mower is moving or standing still. DO NOT engage the cutting blades abruptly as the sudden belt tension on the pulley may cause the engine to stall.

WARNING

When the blade drive is engaged, keep feet and hands away from the discharge opening and from the blade.

To stop the blades, move the lift and disengagement lever (figure 9) into the DISENGAGED position. This raises the deck and disengages the blades.

NOTE

When the machine is used for other than mowing operations the blade drive should be disengaged.

MAINTENANCE

CRANKCASE OIL

To ensure maximum engine performance, perform the following periodic maintenance:

Oil Check

Check the oil level in the crankcase before each use of the machine and after every five hours of operation. Oil should be kept between the add and full marks on the dipstick.

After the first five hours of operating a new engine, drain the oil (See figure 20.) from the crankcase while engine is still hot and refill crankcase with new oil; thereafter change the oil every 25 hours of operation. This procedure ensures for minimum wear of engine parts and provides for virtually trouble-free operation. To change the oil, proceed as follows:

Step 1. With the machine on level ground, place a suitable metal container under the oil drain plug, then remove the drain plug. See figure 20.

Step 2. After the oil has been drained completely from the crankcase, replace the drain plug and tighten.

Step 3. Refill crankcase with 2¼ pints of good quality, type MS, Engine oil into the crankcase. Summer use SAE 30; Winter (Below 40° F) use SAE 5W-20 or SAE 10W.

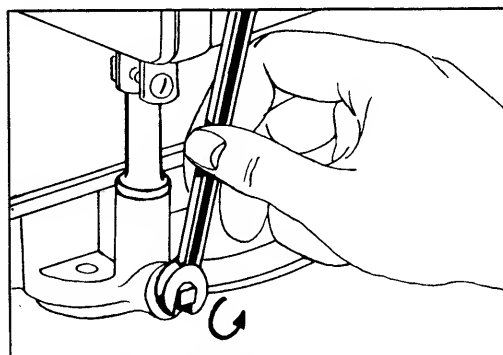


FIGURE 20. OIL DRAIN

LUBRICATION

Lubricate the wheel bearings (2 per wheel) and the upper and lower spindle bearings with SAE 30 oil once a season. See figure 21.

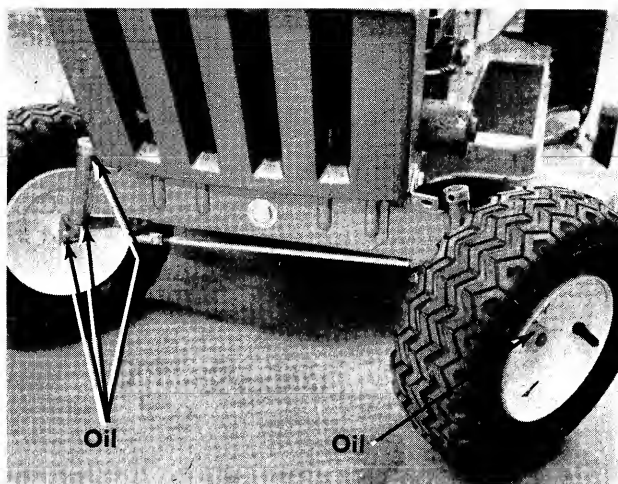


FIGURE 21. WHEEL AND SPINDLE BEARINGS

Lubricate the four rear axle bearings with SAE 30 oil once a season. See figure 22.

The chain can be lubricated by wiping it with an oily rag.

The differential and transmission are sealed at the factory and require no further lubrication.

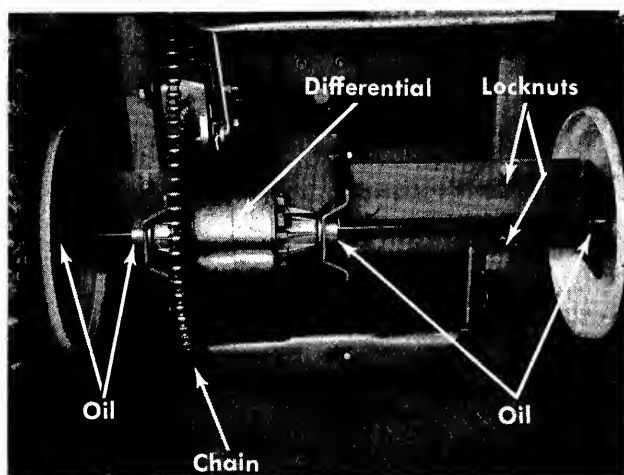


FIGURE 22. REAR AXLE ASSEMBLY

CHAIN ADJUSTMENT

To tighten the chain, loosen two locknuts on each side of rear axle as shown in figure 22.

Tighten the adjusting nuts (figure 23) equally on both sides. Tighten until the chain has $\frac{1}{2}$ inch slack between the sprockets.

The adjusting nuts can be tightened individually to align the axle.

Tighten the 4 locknuts after the adjustment is made.

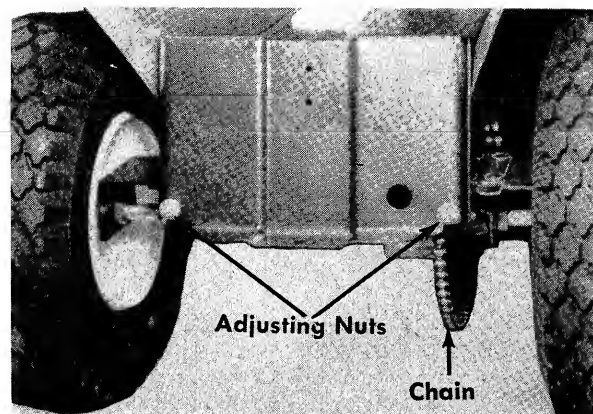


FIGURE 23. CHAIN ADJUSTMENT

AIR CLEANER

Under normal operating conditions, the air cleaner, located on top of the carburetor, must be serviced after every ten hours of use. Under extremely dusty operating conditions the air cleaner must be serviced after every hour of operation. Refer to figure 24.

When assembling the air cleaner, make certain the lip of the foam element extends over edge of the air cleaner body. The foam element will form a protective seal.

- Step 1. Remove two screws and lift off complete air cleaner assembly.
- Step 2. Remove screen and spacers from foam element.
- Step 3. Remove foam element from air cleaner body.
- Step 4.
 - a. Wash foam element in kerosene or liquid detergent and water to remove dirt.
 - b. Wrap foam in cloth and squeeze dry.
 - c. Saturate foam in SAE 30 engine oil, then squeeze out excess oil.
 - d. Assemble parts, fasten to carburetor with screw.

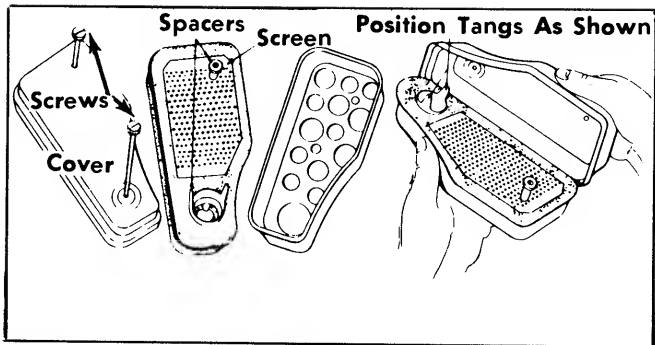


FIGURE 24. AIR CLEANER

CLEANING ENGINE AND BLADE HOUSING

Any fuel or oil spilled on the machine should be wiped off promptly. Grass, leaves, and other dirt must not be left to accumulate around the cooling fins of the engine or on any part of the machine.

Clean the underside of the blade housing after each mowing.

BELTS

Check that belts are free of oil or dirt. Wipe the belts periodically with a clean rag.

NOTE

Belt tension is automatically maintained by the spring on the variable speed bracket on the drive belts and the belt tension on the deck belt is maintained by the two deck springs.

SPARK PLUG

The spark plug gap should be cleaned and reset to a 0.030-inch clearance every hours of engine operation (See figure 25). Spark plug replacement is recommended at the start of each mowing season; check engine parts list for correct plug type.

NOTE

Whenever the spark plug is removed for cleaning, it is advisable to replace the spark plug gasket with a new gasket.

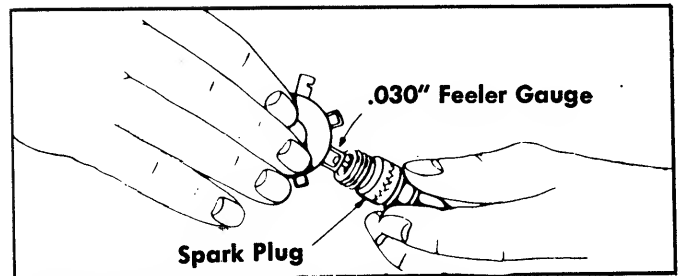


FIGURE 25. SPARK PLUG CLEARANCE

REPLACING BLADE

WARNING

Before beginning work on the cutter blade, remove the spark plug from the cylinder.

Removing and Sharpening Blades. Remove the center bolt and lockwasher. See figure 26. Pull the blade and blade adapter from the blade spindle.

The adapter can be removed from the blade by removing the two adapter bolts, lockwashers and nuts.

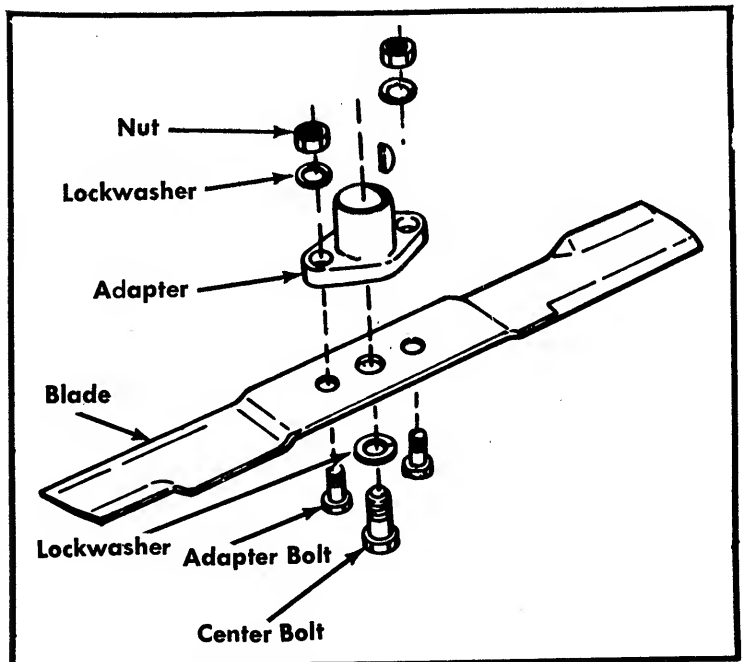


FIGURE 26. BLADE REMOVAL

WHEEL ADJUSTMENT

The caster (forward slant of the king pin) and the camber (tilt of the wheels out at the top) requires no adjustment. Automotive steering principals have been used to determine the caster and camber on the tractor. The front wheels should toe-in 1/8 inch.

To adjust the toe-in follow these steps.

1. Remove the elastic locknut and drop the tie rod end from the wheel bracket.
2. Loosen the hex jam nut on tie rod.
3. Adjust the tie rod assembly for correct toe-in.

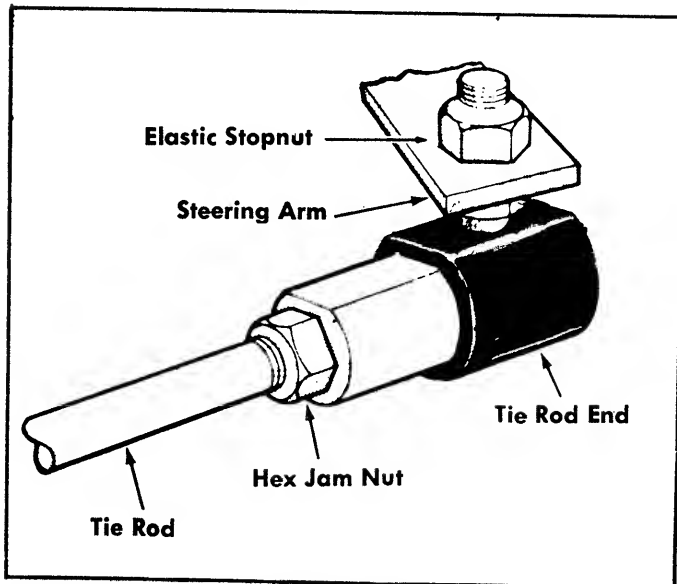


FIGURE 27. TIE ROD ADJUSTMENT

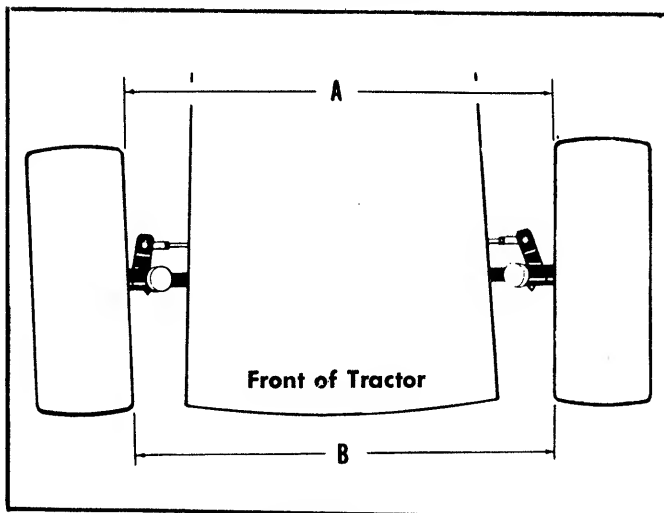


FIGURE 28. TOE-IN DIAGRAM

Dimension "B" should be approximately $\frac{1}{8}$ " less than Dimension "A".

- A.) To increase Dimension "B", screw tie rod into tie rod end.
- B.) To decrease Dimension "B", unscrew tie rod from tie rod end.
- C.) Reassemble tie rod. Check dimensions. Readjust if necessary.

NOTE

To insure safe operation of your unit, ALL nuts and bolts must be checked periodically for correct tightness.

ADJUSTING CARBURETOR CHOKE

Proper choke operation is dependent upon proper adjustment of remote controls on the powered equipment.

To Check Operation of Choke-A-Matic Controls:

Move control lever to CHOKE position. (See figure 7.) The carburetor choke should be closed.

NOTE

The air cleaner can be removed to check the operation of the choke.

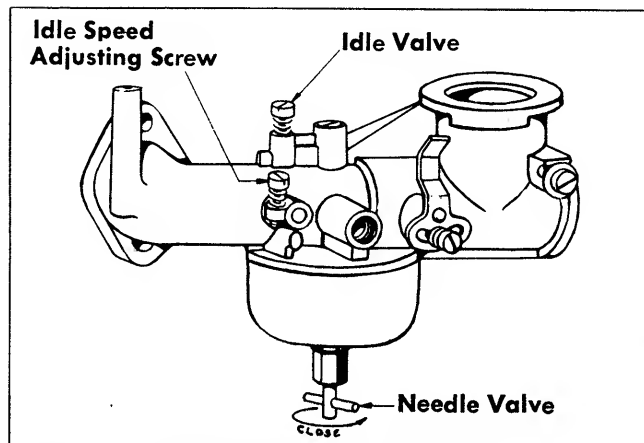


FIGURE 29. CARBURETOR ADJUSTMENT

To Adjust:

Place control lever on equipment in FAST (high speed) position. Loosen control casing clamp screw B. Move control casing A and wire until lever D touches choke operating link at C. Tighten casing clamp screw B. See figure 30.

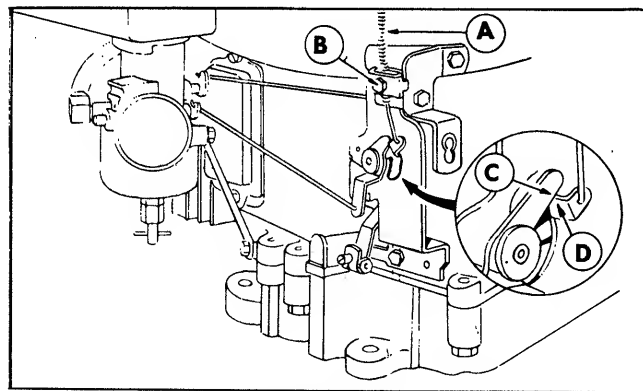


FIGURE 30. CHOKE ADJUSTMENT

PREPARING FOR BELT REMOVAL

1. To prevent gasoline from leaking from the engine, remove the fuel tank cap, place a piece of thin plastic over the neck of the fuel tank and screw on the cap.
2. Disconnect the spark plug wire and ground it against the engine.

NOTE

If the unit is equipped with a battery, continue with step 3.

3. Remove the battery to prevent acid from leaking.



Disconnect the negative terminal first and connect last when installing the battery.

MOWING UNIT BELT REPLACEMENT

- Step 1. Place the lift lever in the disengaged position. See figure 9.
- Step 2. Remove the belt keeper and large bolt on the engine pulley. See figure 31.



FIGURE 31. BELT KEEPER

- Step 3. Unhook the belt from the engine pulley. See figure 32.



FIGURE 32. REMOVING MOWER BELT

- Step 4. Place the lift lever in the engaged position. See figure 9.
- Step 5. Unhook the tension springs on both sides of the deck. See figure 33.

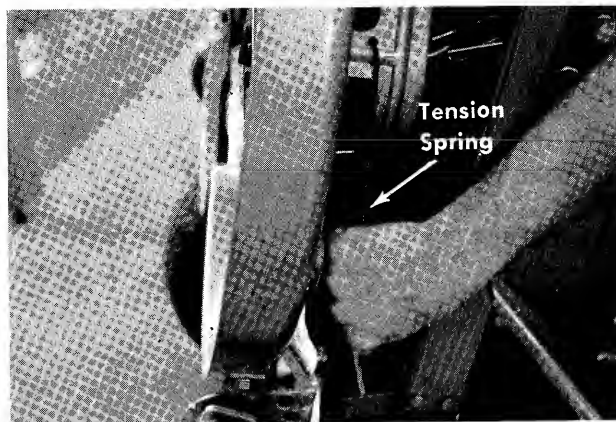


FIGURE 33. REMOVING TENSION SPRINGS

- Step 6. Remove the front four deck links from the cutting deck. See figure 34.
- Step 7. Remove the belt guards from both deck pulleys. See figure 34.
- Step 8. Remove and replace the belt and reassemble.

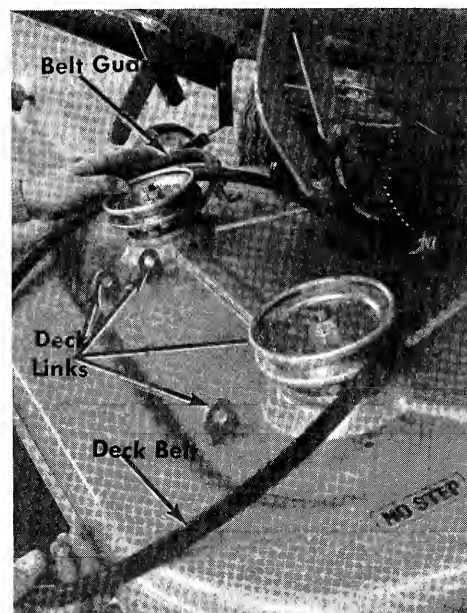


FIGURE 34. DECK LINKS

TRANSMISSION BELTS REMOVAL

- Step 1. Place the lift lever in the disengaged position. See figure 9.
- Step 2. Remove the belt keeper and large bolt on the engine pulley. See figure 31.

- Step 3. Unhook the belt from the engine pulley. See figure 32.
- Step 4. Place the lift lever in the engaged position. See figure 9.
- Step 5. Unhook the tension springs on both sides of the deck. See figure 33.
- Step 6. Remove the front four deck links from the cutting deck. See figure 34.
- Step 7. Tip the deck down as shown in figure 34.

NOTE

Leave the belt attached to the deck pulleys unless you want to replace it.

- Step 8. Remove the engine belt guard by removing the two front engine mounting bolts. See figure 35.

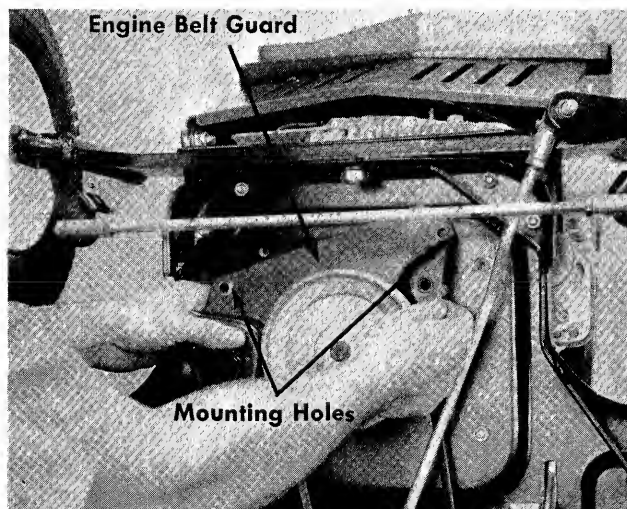


FIGURE 35. BELT GUARD REMOVAL

NOTE

By working between the frame and the deck, it is possible to remove and replace the deck belt without removing the deck, however, the working space is limited.

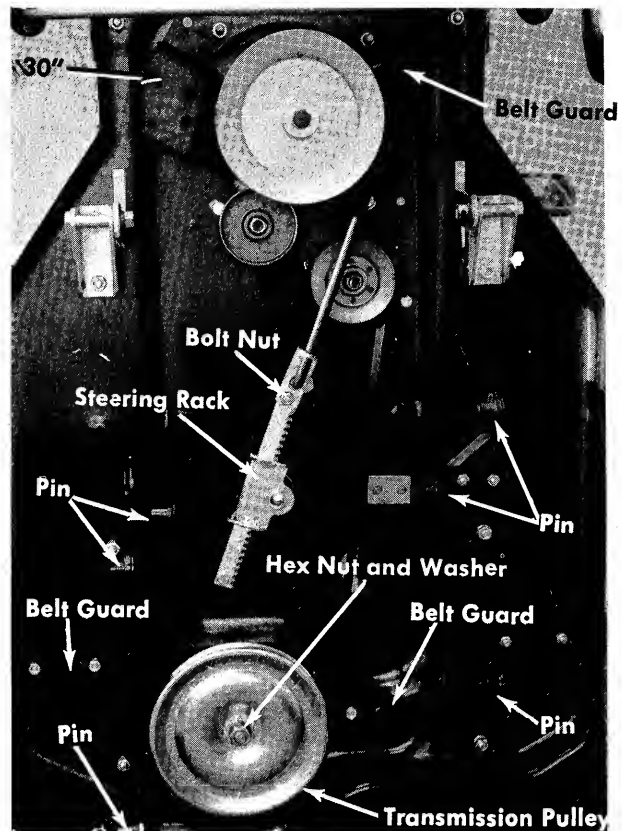


FIGURE 36. BOTTOM VIEW

- Step 9. Removing the transmission belt. See figure 36.
- Remove the entire belt guard from the engine pulley by removing the two front engine bolts. See figure 35.
 - Remove the transmission pulley by removing the hex nut and washer. See figure 36.
 - Remove the bolt and nut from the steering rack and remove the belt.
 - Reassemble in reverse order with the new belt.

OFF-SEASON STORAGE

OFF-SEASON STORAGE

If the machine is to be inoperative for a period longer than 30 days, the following precautions are recommended:

- Step 1. Working outdoors, drain all fuel from the fuel tank. Use a clean dry cloth to absorb the small amount of fuel remaining in the tank, then run the engine until all fuel in carburetor is exhausted.



WARNING

Do not drain fuel while smoking, or if near an open fire.

- Step 2. Drain all the oil from the crankcase (this should be done after the engine has been operated and is still warm) and refill the crankcase with clean new oil.

- Step 3. Disconnect the spark plug wire and remove the spark plug from the cylinder. Pour about six drops of engine oil into the cylinder, and then pull the recoil starter several times to spread the oil on the cylinder wall. Replace the spark plug, but DO NOT connect the wire.

- Step 4. Clean the engine and the entire mower thoroughly.

- Step 5. Lubricate all lubrication points indicated in figures 19 and 20 then wipe the entire machine with an oiled rag in order to protect the surfaces.
-

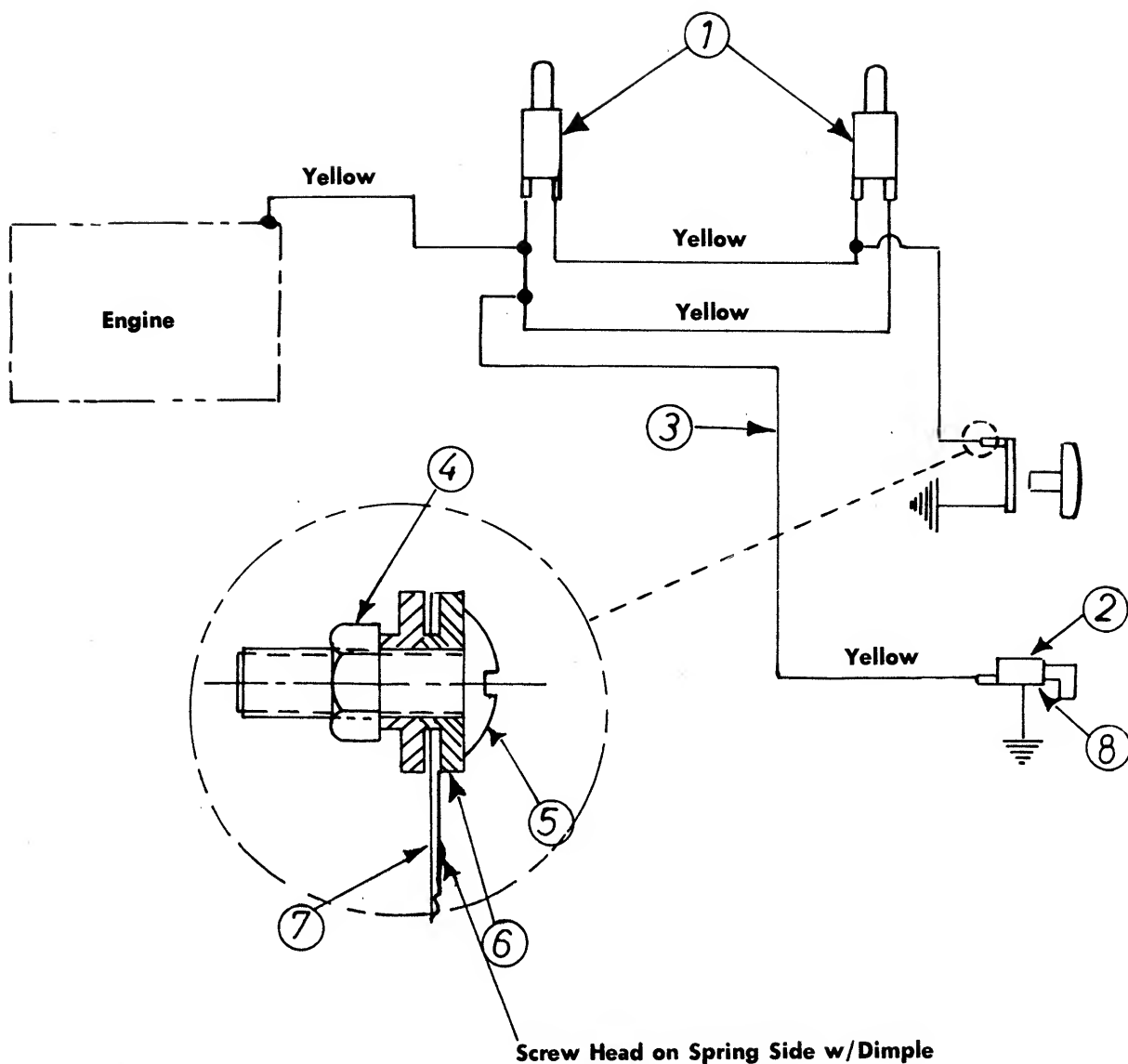
TROUBLE SHOOTING CHART FOR RECOIL START MODELS

CAUTION: ALWAYS DISCONNECT SPARK PLUG BEFORE ATTEMPTING ANY REMEDY.

TROUBLE	LOOK FOR	REMEDY
Engine fails to start.	Safety System	<p>If the engine will not start be sure the clutch control is disengaged; blade controls disengaged, the throttle control is set and the key is turned on.</p> <p>A. Disconnect the yellow wire from the engine. This comes from the ignition switch.</p> <p>B. If the engine fails to start the problem is with the engine, not the safety system.</p> <p>C. If the engine starts, the problem is with the safety system. Check the yellow wire for a ground.</p> <p>D. Check the operation of the switch behind the recoil starter handle.</p> <p>E. If the engine stops when the clutch or blade is engaged, the recoil handle is not pushed into the receptacle and twisted a quarter turn.</p>
	Blocked fuel line or empty gas tank.	Clean fuel line; check fuel supply. Also check fuel shut-off valve.
	Defective spark plug.	<p>Spark plug lead wire disconnected.</p> <p>Faulty spark plug—spark should jump gap between control electrode and side electrode. If spark does not jump, replace spark plug.</p> <p>NOTE: Use insulated pliers to hold the spark plug wire.</p>
	Throttle setting.	Throttle control lever not in the starting position.
	Loose connections	Spark plug wire loose.
Hard starting or loss of power.	Dirty air cleaner.	Remove air cleaner and clean as outlined in Engine Manual .
	Carburetor improperly adjusted.	Review paragraph Carburetor Adjustment .
Excessive vibration.	Bent or damaged blade spindle.	Stop engine immediately; tighten all bolts and make all necessary repairs. If vibration continues, have the unit serviced by a competent repairman.
Unit fails to discharge grass.	Discharge chute clogged.	Clean discharge chute and inside of deck.
	Foreign object lodged in deck.	Remove object from deck. See CAUTION following step 1 in paragraph Operation .
Engine overheats.	Obstructions in air passages.	<p>Remove any obstruction from air passages in shroud. Grass and dirt in engine shroud.</p> <p>Clean cooling fins.</p>
	Oil level.	Fill crankcase to proper oil level.

TROUBLE SHOOTING CHART FOR ELECTRIC START MODELS

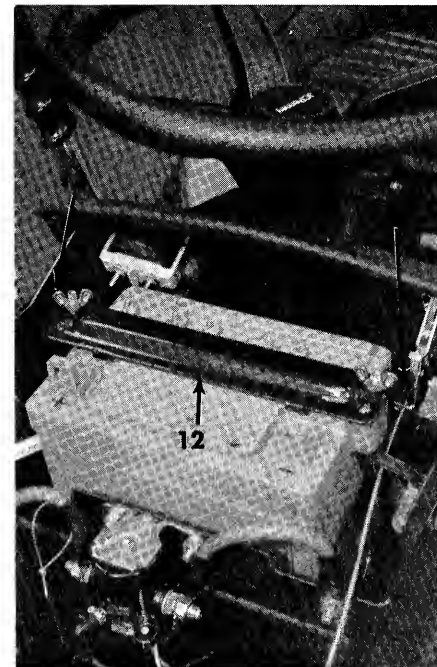
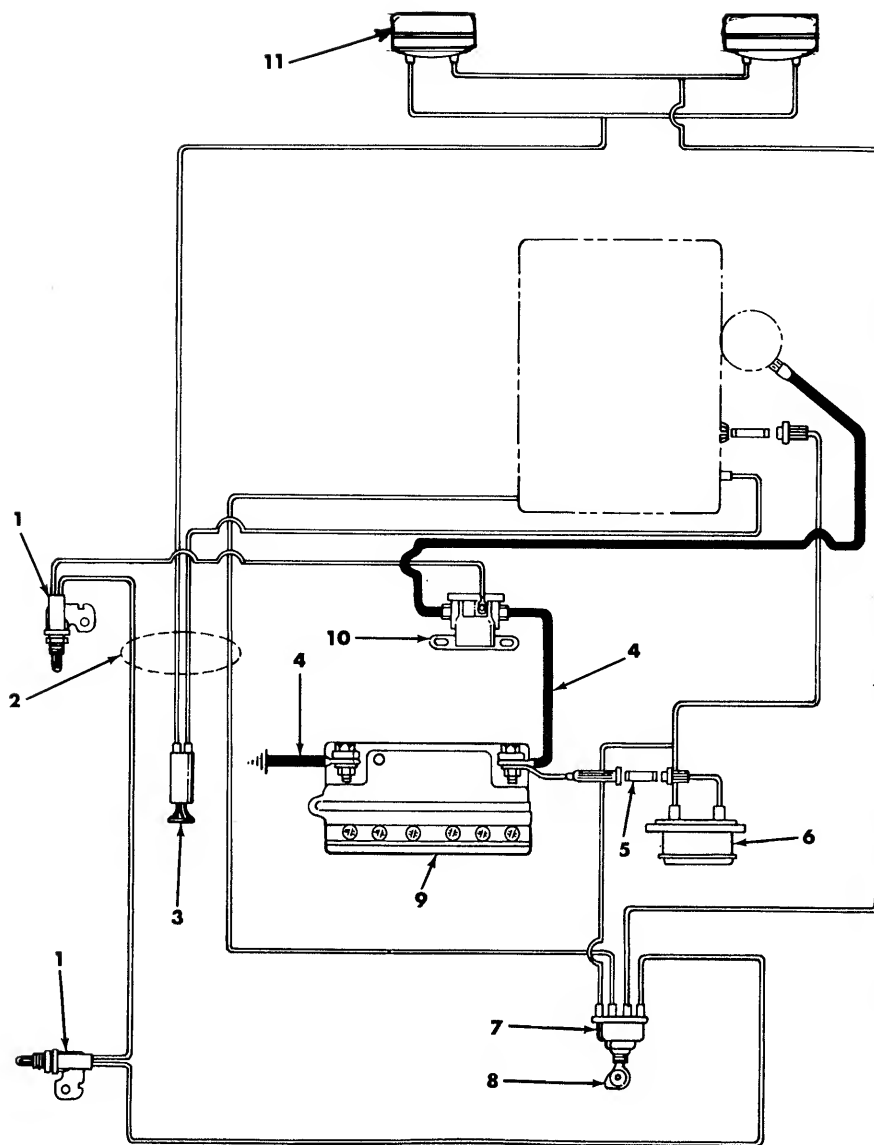
TROUBLE	LOOK FOR	REMEDY
Engine fails to start.	Safety System	<p>A. Check for a blown fuse in the wire leading from the positive terminal of the battery.</p> <p>B. Before checking the safety system further, be sure the clutch control and the blade control are disengaged; only the starting system is being checked. Therefore remove the spark plug lead and ground it to prevent the engine from starting.</p> <p>C. Attach a wire (minimum 18 gauge) to the positive terminal of the battery and touch the other end to the small terminal (coil primary) of the solenoid. If the engine cranks, the problem is in the safety system.</p> <p>D. Check for continuity from the battery to the solenoid. NOTE: The positive terminal of the battery should have a large cable (#8 gauge) and a small wire (#18 gauge) attached to it.</p> <p>E. Check all wires and cable for tightness.</p> <p>F. Use a #8 gauge wire and jump between the two large terminals of the solenoid. If the unit starts, replace the solenoid.</p> <p>G. If the unit fails to start after following the above procedure the problem is probably in the starting motor of the engine.</p>
	Blocked fuel line or empty gas tank.	Clean fuel line; check fuel supply. Also check fuel shut-off valve.
	Defective spark plug.	<p>Spark plug lead wire disconnected.</p> <p>Faulty spark plug—spark should jump gap between control electrode and side electrode. If spark does not jump, replace spark plug.</p> <p>NOTE: Use insulated pliers to hold the spark plug wire.</p>
	Throttle setting.	Throttle control lever not in the starting position.
	Loose connections	Spark plug wire loose.
Hard starting or loss of power.	Dirty air cleaner.	Remove air cleaner and clean as outlined in Engine Manual .
	Carburetor improperly adjusted.	Review paragraph Carburetor Adjustment .
Excessive vibration.	Bent or damaged blade spindle.	Stop engine immediately; tighten all bolts and make all necessary repairs. If vibration continues, have the unit serviced by a competent repairman.
Unit fails to discharge grass.	Discharge chute clogged.	Clean discharge chute and inside of deck.
	Foreign object lodged in deck.	Remove object from deck. See CAUTION following step 1 in paragraph Operation .
Engine overheats.	Obstructions in air passages.	Remove any obstruction from air passages in shroud. Grass and dirt in engine shroud. Clean cooling fins.
	Oil level.	Fill crankcase to proper oil level.



SCHEMATIC FOR ELECTRICAL SYSTEM

PARTS LIST FOR MODELS 135-470A AND 135-480A

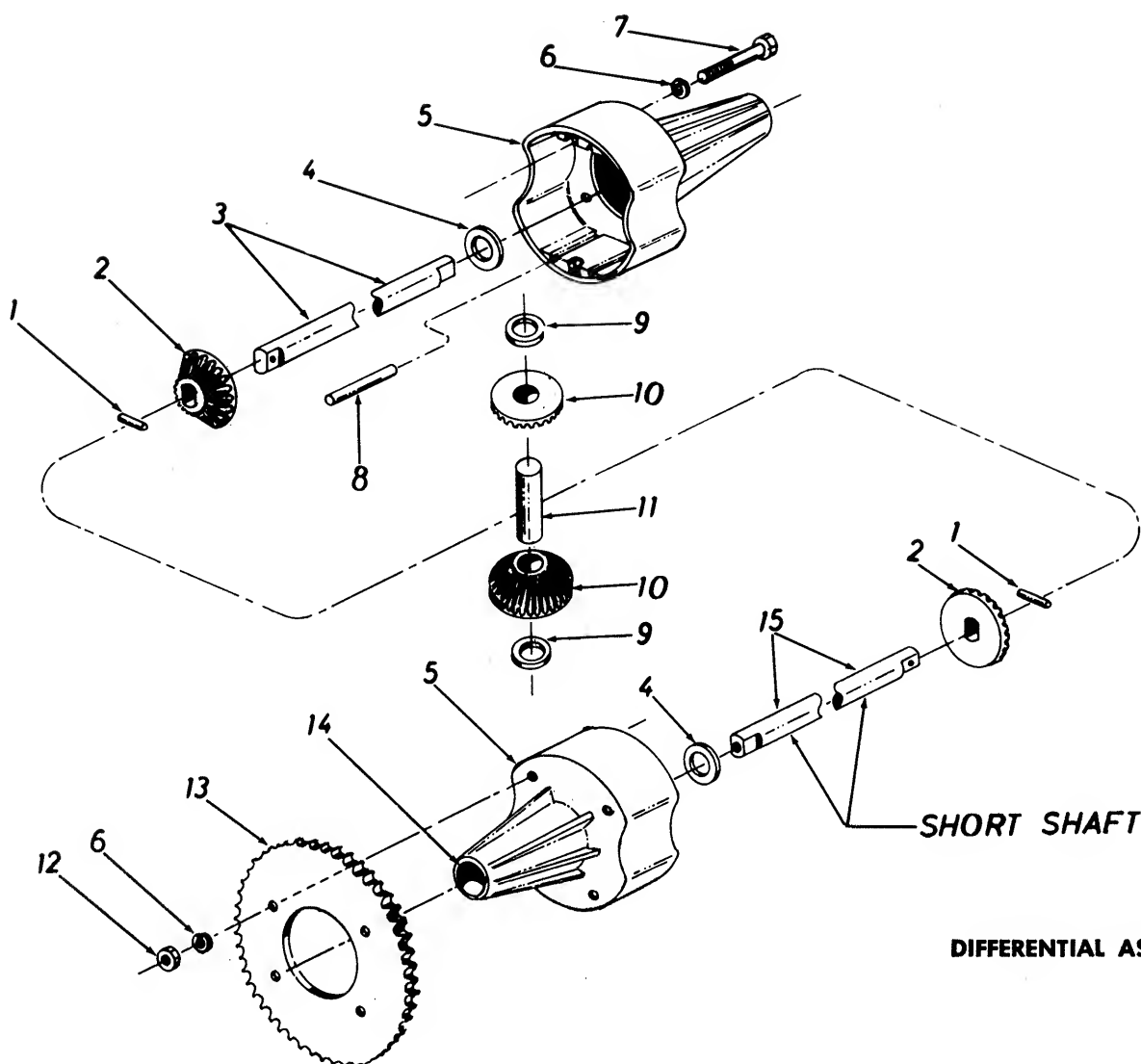
REF. NO.	PART NO.	DESCRIPTION	NEW PART
1	725-0269	Safety Switch Norm Closed-Red	
2	725-0266	Magneto Ignition Switch w/Nut	
3	725-0272	Wire Harness	
4	712-0121	Hex Nut #10-24	
5	710-0425	Truss Mach. Scr. #10-24 x .62	
6	736-0338	Fiber Washer	
7	732-0257	Switch Spring	
8	736-0225	Internal L-Wash. 5/8 I.D.	



PARTS LIST FOR SCHEMATIC MODELS 135-475A AND 135-485A

REF. NO.	PART NO.	DESCRIPTION	NEW PART
1	725-0268	Safety Switch—Black Plunger	
2	725-0364	Wire Harness <i>485</i>	
3	725-0202	Light Switch	
4	725-0122	Wire	
5	725-0298	Fuse 7½ Amp. ¼ Dia. x 1¼ Lg.	
6	725-0119	Ammeter	
7	725-0267	Ignition Switch	
8	725-0201	Key	
9	725-0453	Battery	N
10	725-0270	Solenoid	
11	725-0155 <i>417</i>	Head Lamp <i>475</i>	
12	12614	Battery Hold Down	N
13	711-0222	Hold Down Rods	
14	712-0113	Wing Nuts*	

*For faster service, obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size, as shown on parts list.



DIFFERENTIAL ASSEMBLY

PARTS LIST FOR DIFFERENTIAL ASSEMBLY 717-0314

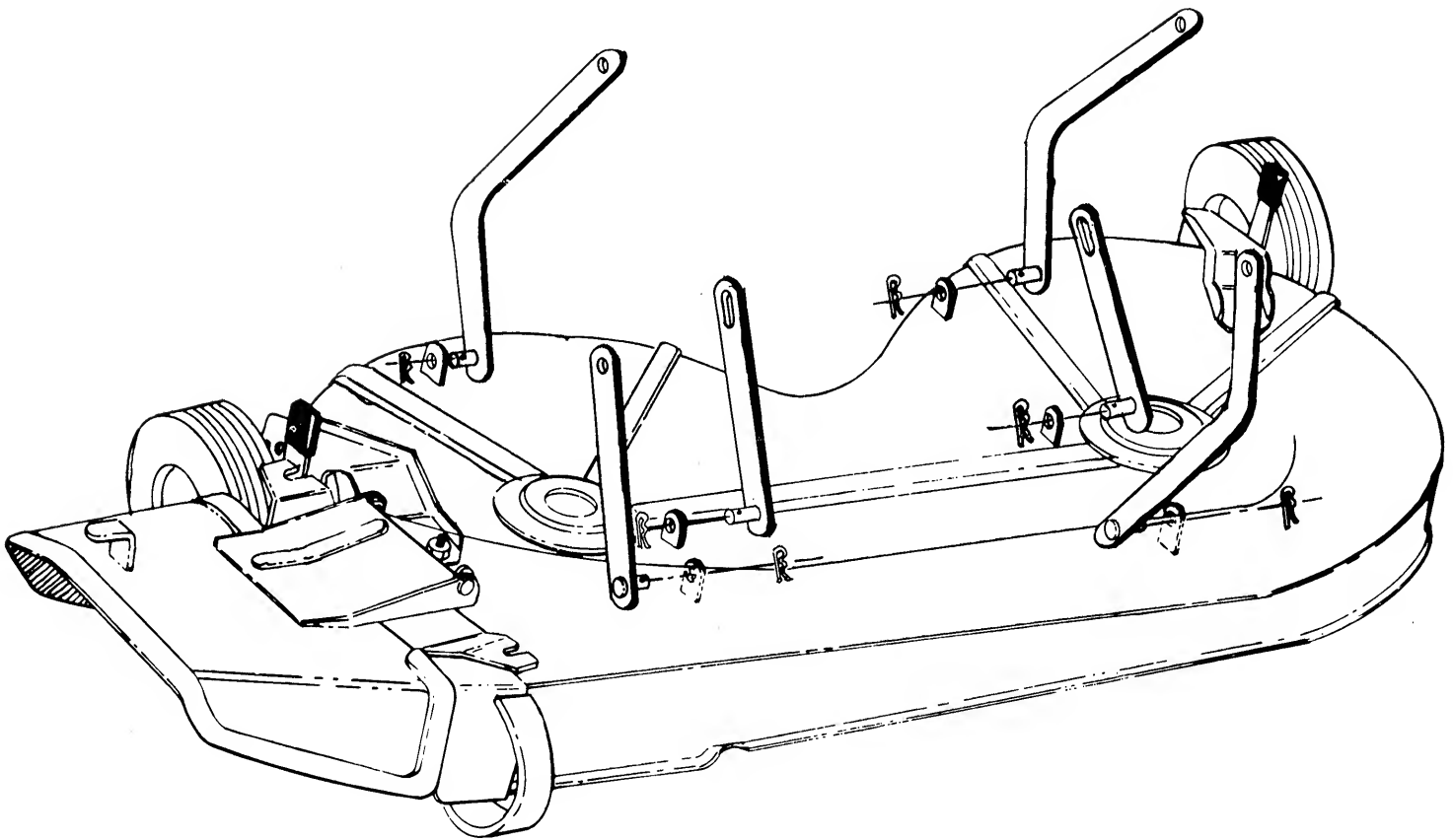
REF. NO.	PART NO.	Qty. Req'd.	DESCRIPTION	NEW PART
1	715-0247	2	Spring Pin Spiral 3/16" Dia. x 1.00" Lg.	N
2	748-0185	2	Gear—Double "D" Hole	
3	738-0249	1	Shaft—Long 16.89" Lg.	
4	736-0188	2	Fl. Wash. .760 I.D. x 1.49 O.D.	
5	719-0150	2	Housing Half	
6	736-0119	8	L-Wash. 5/16" Scr.*	
7	710-0363	4	Hex Scr. 5/16-24 x 4.00" Lg.	
8	715-0123	2	Dowel Pin 3/16" Dia. x .62" Lg.	
9	736-0187	2	Fl. Wash. .640 I.D. x .24 O.D.	
10	748-0158	2	Gear—Round Hole	
11	711-0276	1	Drive Pin	
12	712-0237	4	Hex Cent. L-Nut 5/16-24 Thd.	
13	09133	1	Sprocket—40 Tooth	
14	748-0169	2	Flange Bearing	N
15	738-0250	1	Shaft—Short 9.53" Lg.	
	737-0120		Grease—High Temp. 450F (2 oz.)	

*For faster service obtain standard nuts and bolts locally. If these items cannot be obtained locally, order by part number and size as shown on the parts list.

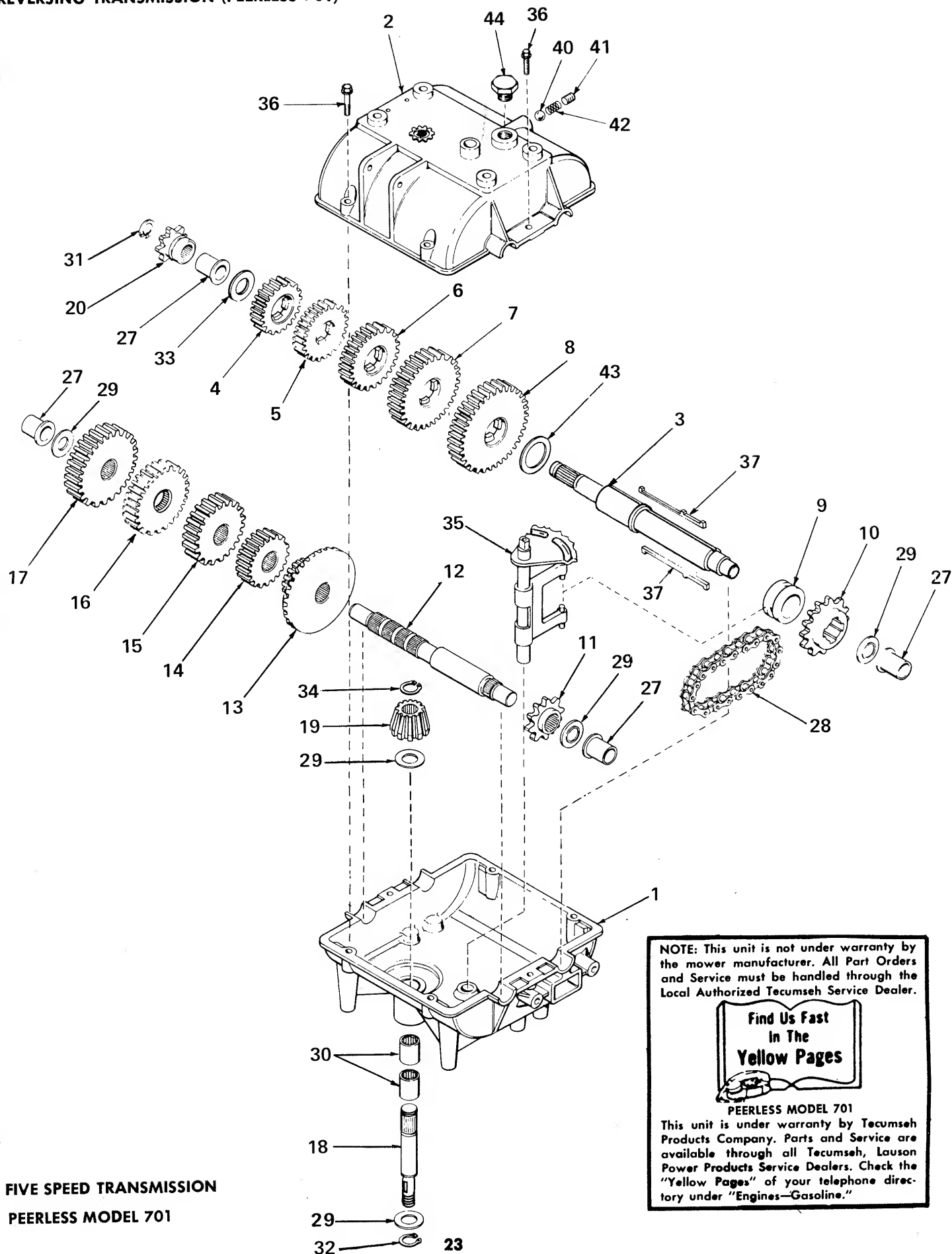
DECK LINKAGE

NOTE

Refer to illustration below for proper deck link hook-up. If the deck is removed for any reason use the illustration below for correct assembly.



REVERSING TRANSMISSION (PEERLESS 701)



NOTE: This unit is not under warranty by the mower manufacturer. All Part Orders and Service must be handled through the Local Authorized Tecumseh Service Dealer.

Find Us Fast
In The
Yellow Pages

PEERLESS MODEL 701

This unit is under warranty by Tecumseh Products Company. Parts and Service are available through all Tecumseh, Lauson Power Products Service Dealers. Check the "Yellow Pages" of your telephone directory under "Engines—Gasoline."

FIVE SPEED TRANSMISSION
PEERLESS MODEL 701

PARTS LIST FOR FIVE SPEED TRANSMISSION PEERLESS MODEL 701

REF. NO.	PART NO.	DESCRIPTION
1	PE-770061	Case, Transmission
2	PE-772070	Cover, Transmission
3	PE-776164	Shaft, Output and Brake
4	PE-778121	Gear, Spur (20 teeth)
5	PE-778122	Gear, Spur (22 teeth)
6	PE-778123	Gear, Spur (25 teeth)
7	PE-778124	Gear, Spur (30 teeth)
8	PE-778125	Gear, Spur (35 teeth)
9	PE-784266	Collar, Shift
10	PE-786060	Sprocket (14 teeth)
11	PE-786061	Sprocket (10 teeth)
12	PE-776134	Shaft, Counter
13	PE-778109	Gear, Bevel (42 tooth and 15 tooth spur gear)
14	PE-778126	Gear, Spur (20 teeth)
15	PE-778127	Gear, Spur (25 teeth)
16	PE-778128	Gear, Spur (28 teeth)
17	PE-778129	Gear, Spur (30 teeth)
18	PE-776140	Shaft, Input
19	PE-778113	Bevel Pinion, Input
20	PE-786049	Sprocket (8 teeth)
27	PE-780105	Bushing, Flanged
28	PE-786062	Chain, Roller (No. 41 chain, 22 links)
29	PE-780072	Race, Thrust
30	PE-780106	Bearing, Needle
31	PE-792072	Ring, Retaining
32	PE-792035	Ring, Retaining
33	PE-780109	Washer
34	PE-788040	Ring, Retaining
35	PE-784271	Rod and Fork Ass'y., Shift
36	PE-792073	Scr., 1/4-20 x 1 1/4 hex hd. tap-tite
37	PE-792089	Key
40	PE-792077	Ball, 5/16" Steel
41	PE-792078	Screw, 3/8-16 x 3/8 set
42	PE-792079	Spring
43	PE-780108	Washer, Thrust
44	PE-792074	Plug

NOTE: This unit is not under warranty by the mower manufacturer. All Part Orders and Service must be handled through the Local Authorized Tecumseh Service Dealer.



PEERLESS MODEL 701

This unit is under warranty by Tecumseh Products Company. Parts and Service are available through all Tecumseh, Lauson Power Products Service Dealers. Check the "Yellow Pages" of your telephone directory under "Engines—Gasoline."

BATTERY WARRANTY CERTIFICATE

The following general warranty policy applies to all batteries sold by IBMA members using this warranty. The nationwide warranty applies only to batteries bearing the IBMA seal of approval.

All new batteries sold by IBMA members carry a warranty against faulty material or workmanship for 90 days from date of purchase. A faulty battery is to be adjusted, repaired or replaced with a new battery by an IBMA member, jobber or dealer only, or the warranty becomes void. An IBMA type battery that is faulty within the 90 day period is to be repaired or replaced with a new battery F.O.B. any IBMA factory supplier or any IBMA authorized dealer, without charge.

Your battery carries a further warranty on a pro-rata adjustment basis covering the number of months determined by the class of service and type of battery. In determining the exchange cost of a new battery, charges will be made for months of service used and the warranty is valid to the original purchaser only.

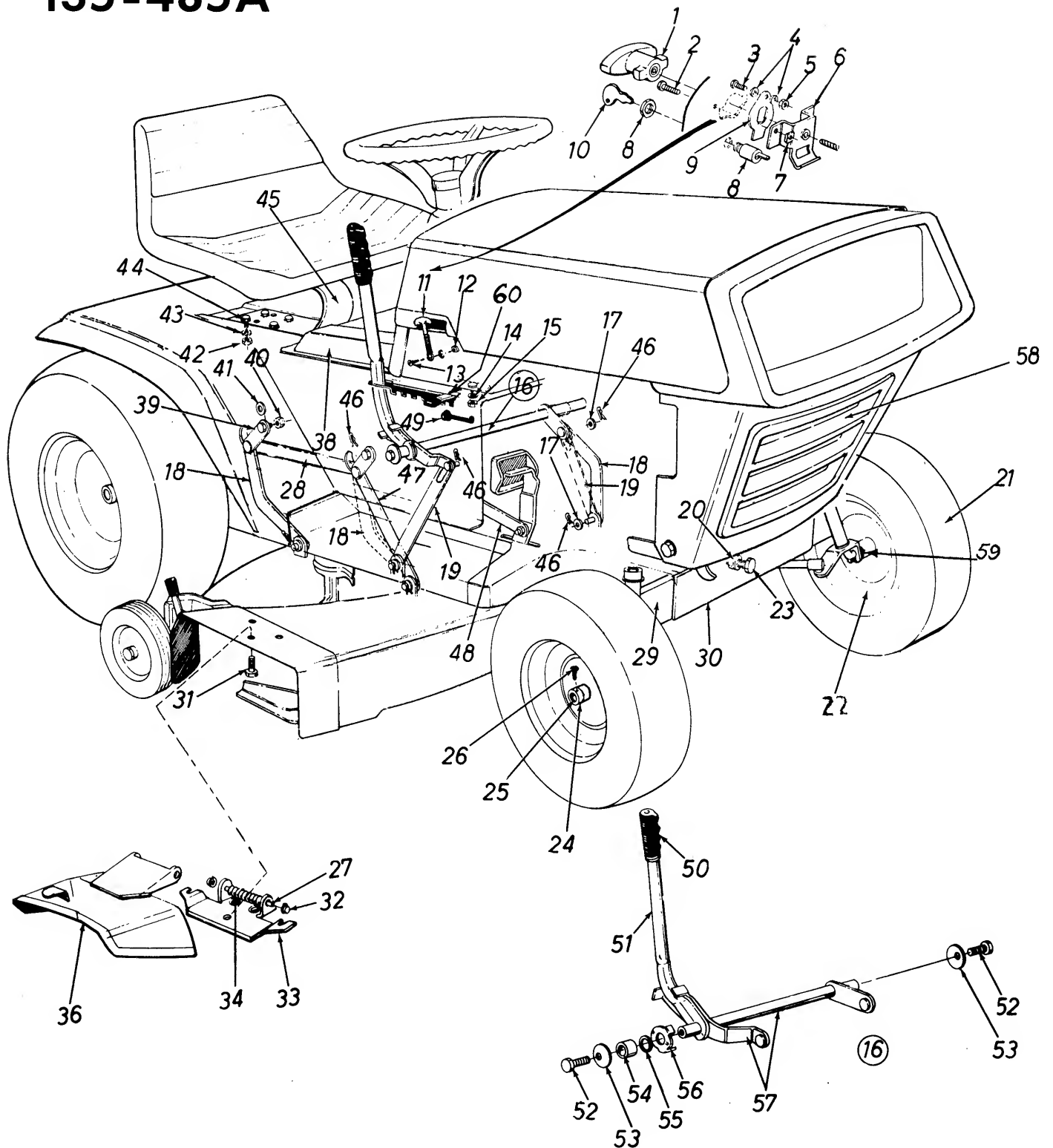
IBMA approved factory suppliers, as well as all IBMA authorized dealers, are to honor this Warranty. If your IBMA approved battery carries the IBMA seal of approval, this Warranty is to be honored by dealers handling IBMA approved batteries everywhere. (Independent Battery Manufacturers Association, Inc.)

Failures in service that are caused by fire, collision, freezing, abuse, faulty electrical equipment or the use of a battery of a group size smaller or specifications lower than the original battery are not covered by this policy.

BATTERY MANUFACTURER MEMBERSHIP LIST

ALABAMA Birmingham Southern Bty. Yocam Batteries Mobile Yocam Batteries Montgomery Ebco Battery	Express Bty. Div. Leeth Brothers FLORIDA Fort Lauderdale Florida Bty. Hialeah East Penn Mfg. Jacksonville Tropex Batteries Yocam Batteries Miami Tropex Batteries Yocam Batteries Orlando Yocam Batteries Pensacola Yocam Batteries St. Petersburg Electro Battery Co. Tampa Bilt-Rite Bty. Mfg. Contract Bty. Mfg. DeSoto Bty. & Elec. Tropex Batteries Yocam Batteries	Contract Bty. Mfg. Yocam Batteries ILLINOIS Belleville Bell City Bty. Mfg. Chicago Illinois Bty. Mfg. Universal Bty. Volta Bty. Corp. Peoria Red Diamond Bty. INDIANA Muncie Stout Storage Bty. IOWA Corydon Voltmaster Council Bluffs Reliance Bty. Prod. Des Moines Voltmaster KANSAS Kansas City American Batteries Contract Bty. Mfg. KENTUCKY Whitesburg Electro-Lite Bty. LOUISIANA New Orleans Central Bty. Reliable Bty.	Shreveport Central Bty. MARYLAND Baltimore East Penn Mfg. MASSACHUSETTS Watertown Atlantic Bty. MICHIGAN Detroit Batteries Mfg. Flint ABC Batteries Holly Detroit Battery Madison Heights C & W Lektra Warren G & M Battery MINNESOTA St. Paul Standard Storage Bty. MISSISSIPPI Florence Contract Bty. Mfg. Jackson Central Bty. New Albany Laher Bty. Prod. MISSOURI Joplin Lead Products	Maryland Heights Electro Bty. Mfg. Sikeston Electro Bty. NEW JERSEY Atlantic City Landis Battery NEW MEXICO Albuquerque Sandia Bty. Mfg. NEW YORK Buffalo East Penn Mfg. Lockport Great Lakes Battery NORTH CAROLINA Charlotte Yocam Batteries Thomasville East Penn Mfg. OHIO Akron Crown Battery Cincinnati Moore Battery Cleveland Crown Battery New Castle Bty. Columbus Crown Battery Fremont Crown Battery	OREGON Beaverton Western Bty., Inc. Portland Laher Bty. Prod. PENNSYLVANIA Altoona East Penn Mfg. Erie New Castle Bty. Lancaster Lancaster Bty. Lyon Station East Penn Mfg. New Castle New Castle Bty. Philadelphia East Penn Mfg. Pittsburgh Simon Bty. & Res. Geidel Bty. Div. RHODE ISLAND Providence Pilot Mfg., Inc. SOUTH CAROLINA Columbia Yocam Batteries TENNESSEE Chattanooga Electro-Lite Bty. Knoxville Southern Bty.	Memphis Central Battery Laher Bty. Prod. Southern Bty. Nashville Electro-Lite Bty. Southern Bty. TEXAS Dallas Continental Bty. Reliable Battery El Paso El Paso Bty. Houston Texford Bty. Co. Reliable Battery San Antonio Reliable Battery UTAH Salt Lake City Laher Bty. Prod. VIRGINIA Arlington Express Bty. Div. Leeth Bros. Lynchburg Hydrate Battery WASHINGTON Seattle Laher Bty. Prod. Spokane Laher Bty. Prod. CANADA Vancouver, B. C. Industrial Bty. & Supply
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135-470A
135-475A
135-480A
135-485A



RIGHT HAND VIEW

PARTS LIST FOR RIGHT HAND VIEW 135-470A, 475A, 480A AND 485A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	11263		Plastic Hande (470A & 480A)	
2	710-0351		Truss Hd. Mach. B-Tapp. Scr. #10 x .50" Lg. (470A & 480A)	
3	710-0425		Truss Hd. Mach. Scr. #10-24 x .62" Lg.* (470A & 480A)	
4	736-0338		Fiber Washer (470A & 480A)	
5	712-0121		Hex Nut #10-24 Thd.* (470A & 480A)	
6	11053		Switch Bracket Ass'y.(470A & 480A)	
7	712-0147		Speed Nut #10-24 U-Type (470A & 480A)	
8	725-0266		Magneto Ignition Switch (470A & 480A)	
9	732-0257		Switch Spring (470A & 480A)	
10	725-0128		Ignition Key Only (470A & 480A)	
11	723-0296		Hood Lock Ass'y.	
12	712-0287		Hex Nut 1/4-20 Thd.*	
13	710-0289		Hex Hd. Cap Scr. 1/4-20 x .50" Lg.*	
14	736-0119		Spring Lockwasher 5/16" Scr.*	
15	712-0267		Hex Nut 5/16-18 Thd.*	
16	—		Lift Handle Ass'y. See Breakdown	
17	736-0192		Flat Washer .53 I.D. x .93 O.D.	
18	10349		Deck Link Ass'y.	
19	10346		Lockout Link Ass'y.	
20	712-0923		Hex Center Locknut 5/8-18 Thd.	
21	734-0494		Front Wheel Ass'y.—Comp. 13.0 x 5.0	
	734-0495		Front Wheel Tire Only	
22	734-0520		Front Wheel Rim Ass'y. Only	
23	710-0622		Hex Hd. Cap Scr. 5/8-18 x 1.62" Lg. Lg.	N
24	711-0169		Collar 5/8" I.D.	
25	748-0184		Front Wheel Bearing	
26	710-0494		Sq. Hd. Set Scr. 5/16-18 x .38" Lg. Cup	

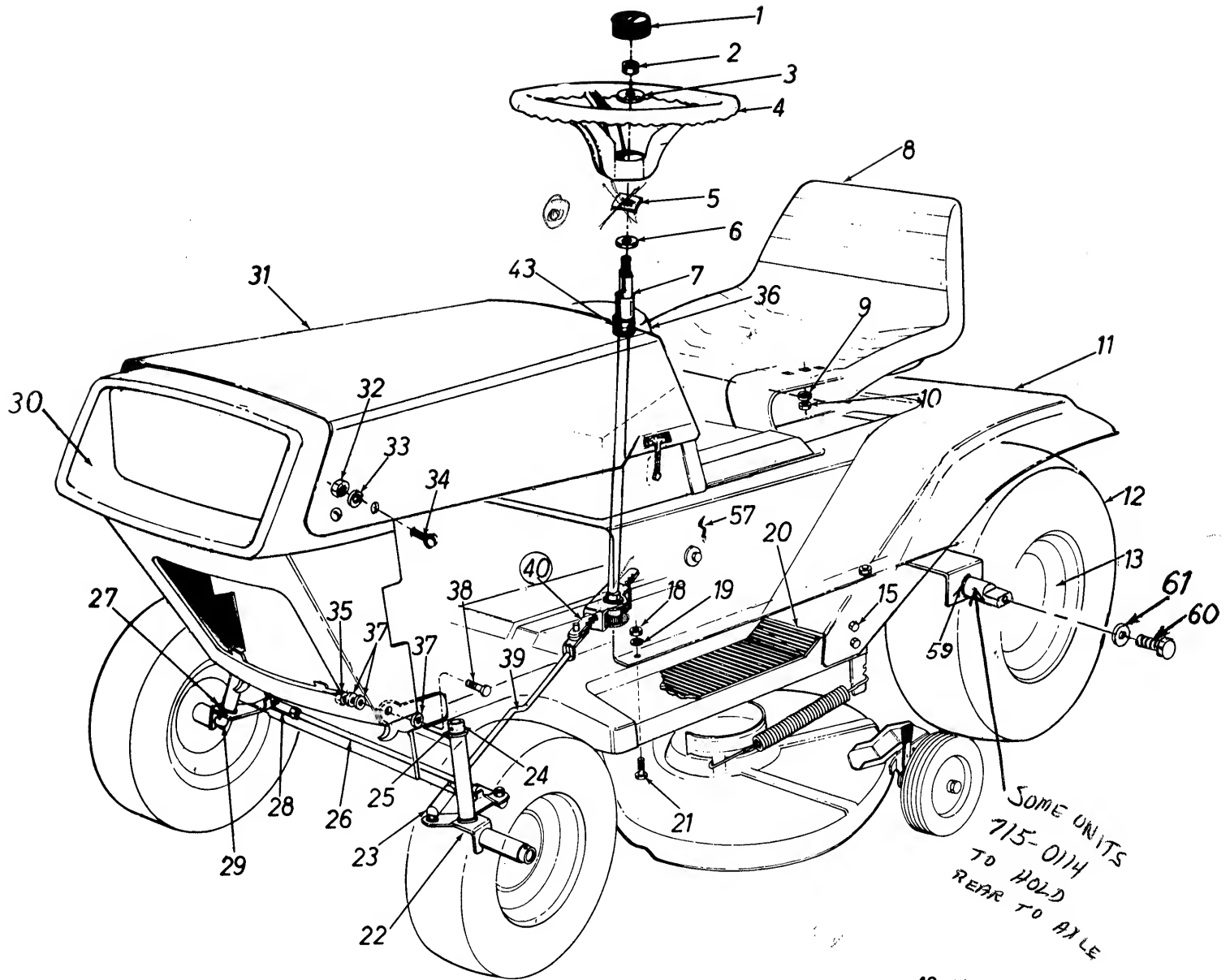
REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
27	711-0571		Pivot Pin	
28	09735		Connecting Rod 3/16 x 1.00 x 12.5" Lg.	
29	12406		Front Pivot Bar Ass'y.	N
30	12411		Front Pivot Bracket	N
31	710-0195		Hex Hd. Cap Scr. 1/4-28 x .62" Lg.*	
32	726-0106		Push-on Flange Palnut	
33	11399		Adapter Plate Assembly	
34	732-0261		Torsion Spring	
35	11633		Chute Cover Ass'y. Comp.	
36	11574		Chute Cover Ass'y.	
38	12333		Upper Frame Cover	
39	09721		Pivot Link Ass'y.	
40	712-0267		Hex Nut 5/16-18 Thd.*	
41	736-0264		Flat Washer .344 I.D. x .62 O.D.	
42	712-0267		Hex Nut 5/16-18 Thd.*	
43	736-0119		Spring Lockwasher 5/16" Scr*	
44	710-0198		Hex Hd. Sems Scr. 5/16-18 x .75" Lg.*	
45	732-0255		Seat Spring 4.50" High	
46	714-0101		Internal Cotter Pin 1/2" Dia.	
47	10904		Deck Link Ass'y.	
48	11059		Parking Brake—Lever Ass'y.—R.H.	
49	726-0121		Push Cap 1/4" Dia.—Black	
50	08118		Grip	
51	11030		Lift Handle R.H.	
52	710-0201		Hex Hd. Cap Scr. 5/8-16 x .62" Lg.*	
53	736-0219		Belleville Washer .400 I.D. x 1.13 O.D.	
54	748-0201		Spacer .635 I.D. x .88 O.D. x .57	
55	736-0233		Wave Washer .660 I.D. x .82 O.D. x .029	
56	11029		Handle Pivot Bracket	
57	11032		Lift Handle Bracket Ass'y.	
58	731-0208		Grille Insert (135-480A & 485A)	
59	736-0156		Fl.-Wash.	
60	11027		Handle Stop Brkt. Ass'y.	
	11249		Knob for Handle Stop Brkt.	

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally order by part number and size

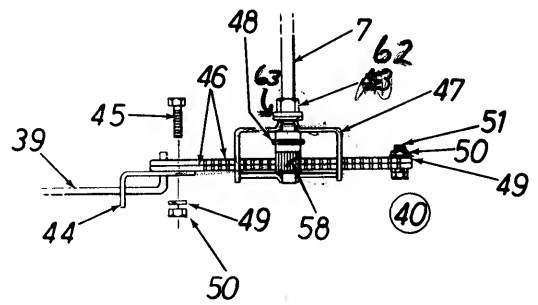
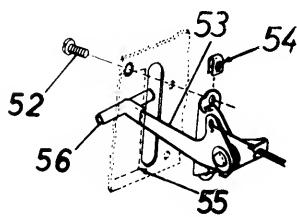
(463—Top Flite Red) Models 135-470A & 475A
(462—Red Flake) Models 135-480A & 485A

When ordering parts if color or finish is important, use appropriate color code shown at left.
(e.g.—Red Flake Finish—11839 (462)).

135-470A
135-475A
135-480A
135-485A



SOME UNITS
715-0114
TO HOLD
REAR TO AXLE



PARTS LIST FOR LEFT HAND VIEW MODELS 135-470A, 475A, 480A AND 485A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	731-0220		Steering Wheel Cap		31	11855-463		Hood-Front (135-470A & 475A)	
2	712-0158		Hex Center Locknut 5/16-18 Thd.			11836-462		Hood-Front (135-480A & 485A)	
3	736-0242		Belleville Washer .34 I.D. x .88 O.D.		32	712-0287		Hex Nut 1/4-20 Thd.*	
4	731-0219		12.0 inch Steering Wheel		33	736-0329		Spring Lockwasher 1/4" Scr.*	
5	736-0156		Wave Washer .660 I.D. x .88 O.D.		34	710-0286		Truss Hd. Mach. Scr. 1/4-20 x .50" Lg.*	
6	736-0174		Steering Shaft		35	712-0375		Hex Center Locknut 3/16-16 Thd.	
7	738-0200		Seat Ass'y Complete—10.0" Black (Mounting Bolt Molded in Seat)		36	11861		Dash Panel Ass'y. (134-485A)	
8	757-0241		Spring Lockwasher 1/2" Scr.*			11862		Dash Panel and Battery Box Ass'y. (134-485A)	
9	736-0921		Hex Nut 1/2-13 Thd.*		37	736-0105		Belleville Washer	
10	712-0206		Fender (135-470A & 475A)		38	710-0253		Hex Hd. Cap Scr. 3/16-16 x 1.00" Lg.*	
11	09087-463		Fender (135-480A & 485A)		39	747-0138		Steering Rod	N
	11839-462		Rear Wheel Ass'y.—Comp. 18 x 6.50	N	40	—		Steering Ass'y. See Breakdown	
12	734-0592		Rear Wheel Tire Only 18 x 6.50		43	748-0227		Hex Flange Bearing .62 I.D. Bronze	
	734-0294		Rear Wheel Rim Ass'y.	N	44	12372		Steering Rod Bracket	N
13	734-0594		Hex Hd. Cap Scr. 1/4-20 x .62" Lg.*		45	710-0412		Hex Hd. Cap Scr. 1/4-28 x .75" Lg.*	
15	710-0258		Hex Nut 5/16-18 Thd.*		46	11048		Steering Segment	
18	712-0267		Spring Lockwasher 5/16" Scr.*		47	11074		Steering Housing Ass'y.	
19	736-0119		Foot Pad 15.75" Lg. x 4.0" Wide		48	715-0134		Spring Pin Spirol 3/16" Dia. x 1.50" Lg.	
20	723-0241		Hex Sems Scr. 5/16-18 x .62" Lg.*		49	736-0329		Spring Lockwasher 1/4" Scr.*	
21	710-0259		Front Axle Ass'y. L.H.		50	712-0138		Hex Nut 1/4-28 Thd.*	
22	09098-462		Ball Joint Ass'y. (Tie Rod End)		51	710-0412		Hex Hd. Cap Scr. 1/4-28 x .75" Lg.*	
23	723-0156		Collar 3/8" I.D.		52	710-0351		Truss Hd. Mach. B-Tapp Scr. #10 x .50" Lg.	
24	711-0169		Sq. Hd. Set Scr. 5/16-18 x .38 Cup		53	746-0160		Throttle Control—Complete	
25	710-0494		Tie Rod	N	54	712-0147		Speed Nut #10-24 U-Type	
26	711-0613		Flange Bearing .630 I.D.		55	11861		Dash Panel Ass'y. (135-480A)	
27	748-0227		Ball Joint Ass'y. (Tie Rod End)			11862		Dash Panel and Battery Box Ass'y. (135-480A)	
28	723-0156		Front Axle Ass'y. R.H.		56	722-0115		Knob Only—Throttle Control	
29	09095-462		Grille (135-470A)		57	11852		Upper Frame	
30	10491-463		Grille (135-475A)		58	748-0203		12 Teeth Spur Gear	
	10793-463		Grille (135-480A)		59	736-0134		Fl.-Wash.	
	719-0194		Grille (135-485A)		60	736-0242		Belleville Wash.	
	719-0197				61	710-0627		Hex Wash. Hd. Tapp. Scr. w LOCK. 5/16-24 x .75" Lg.	
					62	748-228		HEX FLG. Brg. .56 I.D.	
					63	736-192		FL. WASH .53 I.D. X .730 OD	

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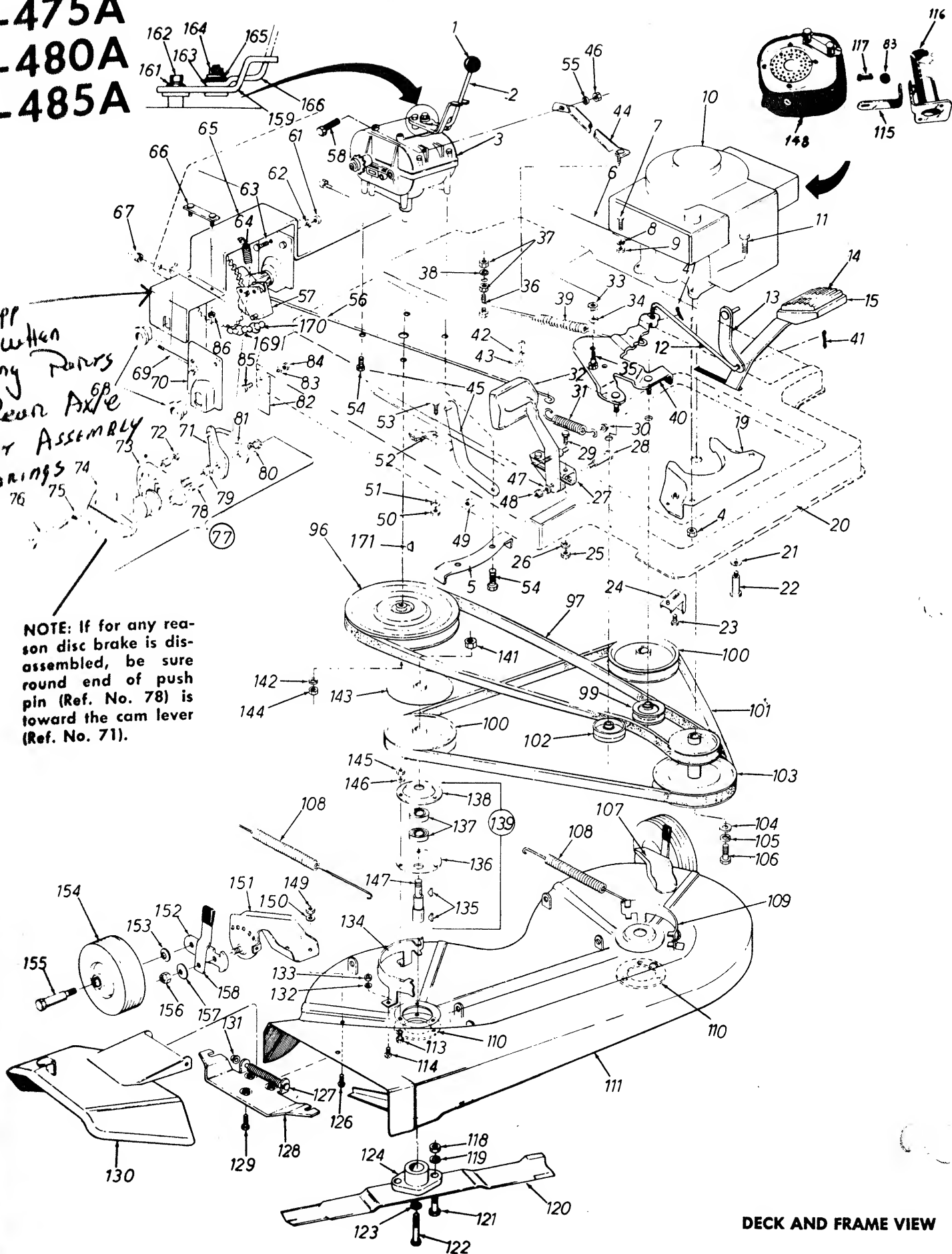
(463—Top Flite Red) Models 135-470A & 475A
(462—Red Flake) Models 135-480A & 485A

When ordering parts if color or finish is important, use appropriate color code shown at left. (e.g. Red Flake Finish—11839 (462)).

135-470A
135-475A
135-480A
135-485A

SEE SUPP
SHEET WHEN
ORDERING PARTS
FOR REAR AXLE
BRACKET ASSEMBLY
& BEARINGS 74

NOTE: If for any reason disc brake is disassembled, be sure round end of push pin (Ref. No. 78) is toward the cam lever (Ref. No. 71).



DECK AND FRAME VIEW

PARTS LIST FOR DECK AND FRAME VIEW MODELS 135- 470A, 475A, 480A AND 485A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	720-0165		Knob (For Transmission, Lever)		50	712-0287		Hex Nut 1/4-20 Thd.*	
2	11545		Shift Lever		51	736-0329		Spring Lockwasher 1/4" Scr.*	
3	—		5 Speed Transmission (See Breakdown on Page 23)		52	761-0147		Blade Brake Ass'y. .88 High	
4	712-0267		Hex Nut 5/16-18 Thd.*		53	710-0134		Carriage Bolt 1/4-20 x .62" Lg.*	
5	11845		Transmission Belt Guard		54	710-0198		Hex Sems Scr. 5/16-18 x .75" Lg.*	
6	11095		Engine Brace		55	736-0329		Spring Lockwasher 1/4" Scr.*	
7	710-0259		Hex Sems Scr. 5/16-18 x .62" Lg.*		56	747-0106		Brake Rod .25" Dia. x 23.50" Lg.	
8	736-0119		Spring Lockwasher 5/16" Scr.*		57	10398		Disc Brake Bracket Ass'y.	
9	712-0267		Hex Nut 5/16-18 Thd.*		58	710-0412		Hex Hd. Cap Scr. 1/4-28 x .75" Lg.*	
10	—		Engine		61	712-0267		Hex Nut 5/16-18 Thd.*	
11	710-0442		Hex Hd. Cap Scr. 5/16-18 x 1.50" Lg.*		62	736-0119		Spring Lockwasher 5/16" Scr.*	
12	747-0112		Clutch Rod		63	710-0198		Hex Sems Scr. 5/16-18 x .75" Lg.*	
13	11057		Parking Brake—Lever Ass'y.—L.H.		64	732-0157		Spring .38 O.D. x 3.25	
14	10614		Pedal Pad Vinyl		65	10362		Rear Axle Bracket Ass'y.	
15	11037		Clutch Pedal Ass'y.		66	10360		Axle Bolt Plate Ass'y.	
19	12654		Engine Belt Guard Ass'y.	N	67	712-0429		Hex Inserted Locknut 5/16-18 Thd.	
20	11090		Frame Ass'y.		68	748-0151		Flange Bearing with Flats .753 I.D.	
21	736-0105		Belleville Washer 3/8" Scr.		69	710-0437		Chain Adjusting Link 5/16-18 x 4.38" Lg.	
22	738-0129		Shoulder Scr. .498" Dia. x 2.00" Lg.*		70	10364		Rear Axle Plate	
23	710-0259		Hex Sems Scr. 5/16-18 x .62" Lg.*		71	18-2770-0000		Cam Lever	
24	10426		Belt Keeper Ass'y.		72	712-0375		Hex Center Locknut 3/8-16 Thd.	
25	712-0267		Hex Nut 5/16-18 Thd.*		73	12-1041-0000		Casting, Carrier Side	
26	736-0119		Spring Lockwasher 5/16" Scr.*		74	12-1039-0000		Casting, Cam Side	
27	11039		Pedal "U"-Bracket Ass'y.		75	761-0138		Spacer for Disc Brake 5/8 O.D. x 5/8" Lg.	
28	738-0213		Shoulder Scr. .498" Dia. x 1.450" Lg.		76	710-0316		Hex Hd. Cap Scr. 3/8-16 x 3.50" Lg.	
29	710-0198		Hex Sems Scr. 5/16-18 x .75" Lg.*		77	761-0137		Disc Brake Assembly—Comp.	
30	726-0100		Push Nut 3/8" Rod		78	05-1033-0000		Push Pin	
31	732-0245		Brake Spring		79	06-1029-0000		Compression Spring	
32	11036		Brake Pedal Bracket Ass'y.		80	02-1011-0000		Locknut	
33	712-0267		Hex Nut 5/16-18 Thd.*		81	03-1030-0000		Thrust Washer 5/16" I.D.	
34	736-0119		Spring Lockwasher 5/16" Scr.*		82	10410		Spring Bracket	
35	738-0140		Shoulder Scr. .437" Dia. x .180" Lg.		83	736-0329		Spring Lockwasher 1/4" Scr.*	
36	710-0289		Hex Hd. Cap Scr. 1/4-20 x .50" Lg.*		84	712-0287		Hex Nut 1/4-20 Thd.*	
37	712-0287		Hex Nut 1/4-20 Thd.*		85	710-0258		Hex Hd. Cap Scr. 1/4-20 x .62" Lg.*	
38	736-0329		Spring Lockwasher 1/4" Scr.*		86	712-0429		Hex Inserted Locknut 5/16-18 Thd.	
39	732-0191		Spring .75 O.D. x 11.0" Lg.		96	756-0174		Transmission Split Pulley .50 I.D.	
40	12448		Idle Bracket Ass'y.	N	97	754-0191		"V"-Belt 1/2 x 65" Lg. (Transmission)	
41	714-0507		Cotter Pin 3/32" Dia. x .75" Lg.		99	756-0116		"V"-Belt Idler 3.06" O.D.	
42	736-0119		Spring Lockwasher 5/16" Scr.*		100	756-0124		Deck Pulley 4.75" O.D.	
43	712-0267		Hex Nut 5/16-18 Thd.*		101	754-0151		"V"-Belt 21/32 x 67" Lg. (Blade Drive Belt)	
44	10396		Transmission Support Bracket Ass'y.		102	756-0217		"P"-Flat Idler 2.75" O.D.	N
45	11056		Parking Brake—Lever Ass'y. R.H.		103	756-0253		Two Step Engine Pulley	N
46	712-0138		Hex Nut 1/4-28 Thd.*		104	736-0235		Flat Washer .406 I.D. x 1.25 O.D.	
47	736-0169		Spring Lockwasher 3/8" Scr.*		105	736-0169		Spring Lockwasher 3/8" Scr.*	
48	712-0798		Hex Nut 3/8-16 Thd.*						
49	712-0429		Hex Inserted Locknut 5/16-18 Thd.						

PARTS LIST (CONTINUED) MODELS 135-470A, 475A, 480A AND 485A

F. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
106	710-0152		Hex Hd. Cap Scr. 3/8-24 x 1.00" Lg.*		135	714-0365		#6 Hi-Pro Key 5/32 x 5/8" Dia.	
107	11237		Wheel Bracket Ass'y. L.H. (Deck)		136	08253		Bearing Housing	
108	732-0191		Spring .75 O.D. x 11.0" Lg. (Deck)		137	741-0919		Ball Bearing .787 I.D. x 1.85 O.D.	
109	12672		Belt Guard—L.H. (Deck)	N	138	08253		Bearing Housing	
110	09164		Deck Reinforcement Plate		139	09321		Blade Spindle Ass'y. Comp.	
111	12674		34 inch Deck Assembly	N	141	712-0242		Hex Jam Nut 5/8-11 Thd.	
113	710-0322		Hex Sems Scr. 5/16-18 x 1.00" Lg.*		142	736-0921		Spring Lockwasher 1/2" Scr.*	
114	710-0289		Hex Hd. Cap Scr. 1/4-20 x .50" Lg.*		143	09322		Blade Brake Disc.	
115	11857		Muffler Bracket		144	712-0922		Hex Jam Nut 1/2-20 Thd.	
116	751-0124		Muffler Extension Ass'y.		145	712-0287		Hex Nut 1/4-20 Thd.*	
117	710-0289		Hex Hd. Cap Scr. 1/4-20 x .50" Lg.*		146	736-0329		Spring Lockwasher 1/4" Scr.*	
118	712-0123		Hex Nut 5/16-24 Thd.*		147	711-0255		Blade Spindle	
119	736-0119		Spring Lockwasher 5/16" Scr.*		148	—		Lo-Tone Muffler Ass'y. (Order from Briggs & Stratton)	
120	742-0120		34.0 inch Blade		149	712-0287		Hex Nut 1/4-20 Thd.*	
121	710-0117		Hex Hd. Cap Scr. 5/16-24 x 1.00" Lg. Heat Treated		150	736-0329		Spring Lockwasher 1/4" Scr.*	
122	710-0459		Hex Hd. Cap Scr. 3/8-24 x 1.50" Lg. Heat Treated		151	11236		Wheel Bracket Ass'y.—R.H. (Deck)	
123	736-0217		Spring Lockwasher 3/8" Scr. Heavy Duty		152	10937		Wheel Pivot Bar	
124	10769		Blade Adapter Kit		153	736-0105		Belleville Washer	
125	11633		Chute Cover Ass'y. Comp. (Includes Ref. No's. 127, 128, 129, 130 & 131)		154	734-0295		Wheel Ass'y. 5.0" Dia. (Deck)	
126	710-0289		Hex Hd. Cap Scr. 1/4-20 x .50" Lg.*		155	738-0119		Shoulder Scr. .625" Dia. x 1.75" Lg.	
127	711-0571		Pivot Pin		156	712-0116		Hex Inserted Locknut 3/8-24 Thd.	
128	11399		Adapter Plate Ass'y.		157	736-0105		Belleville Washer	
129	710-0195		Hex Hd. Cap Scr. 1/4-28 x .62" Lg.*		158	10949		Spring Lever Ass'y. with Knob	
130	11574		Chute Cover Ass'y.		159	11846		Shift Lever Bracket Ass'y.	
131	726-0106		Push Nut 1/4" Rod		161	736-0242		Belleville Washer .345 I.D. x .88 O.D.	
132	736-0329		Spring Lockwasher 1/4" Scr.*		162	710-0237		Hex Hd Cap Scr. 5/16-24 x .62" Lg.*	
133	712-0287		Hex Nut 1/4-20 Thd.*		163	735-0126		Rubber Washer .33 I.D. x .87 O.D.	
134	12673		Belt Guard—R.H. (Deck)	N	164	712-0158		Hex Center Locknut 5/16-18 Thd.	
					165	736-0159		Flat Washer .344 I.D. x .88 O.D.	
					166	11545		Shift Lever	
					167	09963		Hitch Bracket (Not Shown)	
					168	731-0144		Vinyl Black Strip for Dash 12.0" Lg. (Not Shown)	
					169	713-0163		#420 Chain 1/2" Pitch x 79 Links	
					170	713-0154		#420 Master Link	
					171	714-0129		#4 Hi-Pro Key 3/32 x 5/8" Dia. Hdn.	

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(463—Top Flite Red) Models 135-470A & 475A

(462—Red Flake) Models 135-480A & 485A

When ordering parts if color or finish is important, use appropriate color code shown at left. (e.g.—Red Flake Finish—11839 (462)).

The engine is not under warranty by the mower manufacturer. If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines—Gasoline."

